Letter to Editor

Vol 1 | Issue 1 | July - Sep 2013 | page 42 | Shah KC, Shah PK

Dear Sir,

Every postgraduate doctor aspires to let the world know about his three years of hard work- his Thesis. But many are unable to publish it because of lack of guidance, opportunity, complicated rules regarding manuscripts and a low acceptance rate. This venture by Indian Orthopaedic Research Group (IORG), overcoming all this, is a dream come true for all young researchers. Our heartiest congratulations to you on initiating the Journal of Medical Thesis.

With new rules and regulations from the universities and Medical Council of India, both stressing on research and publication, JMT provides an apt platform for publication of their first research document. Instead of an elaborate manuscript demanded by other journals, JMT needs submission only of an extended abstract. Also, JMT being a valuable repository of thesis, it will be a useful guide to all postgraduate students in the process of writing their dissertation and also improve its quality by avoiding plagiarism.

In this era of evidence based medicine and multidisciplinary approach towards patient care, JMT provides a one stop destination for all sub-specialities of medicine to come together to share, discuss and research together for the best patient outcome. In future multidisciplinary studies can be undertaken with the help of such varied and eminent faculty.

Overall JMT is an innovative answer to the need of the hour. We wish a very bright future for the journal.

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Dr Prachi Shah
Transtibial vs Anatomical tunneling techniques for arthroscopic ACL Reconstruction in non-athletic population

Vol 1 | Issue 1 | July - Sep 2013 | page 35-36 | Electricwala A, Latkar C, Patil S, Jog V, Mahajan A, Deshpande S

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Abstract

Background: Transtibial tunneling technique has been the gold standard for arthroscopic ACL reconstruction for many years. Despite this high level of success, a growing body of literature has questioned whether this technique sufficiently re-creates the anatomy and function of the native ACL. This created a vogue amongst the arthroscopists for anatomical ACL reconstruction using the anteromedial portal. The purpose of this study was to compare the stability and functional outcome using both the techniques.

Materials and methods: 50 patients (39 males and 11 females), all non-athletes with ACL deficient knees underwent ACL reconstruction, 25 by transtibial and 25 by anatomical technique. The basis on stability using Lachman’s and Slocum’s tests and functional outcome using Lysholm knee score at 3, 6 and 12 months.

Result: There was no significant difference in the Functional outcome (Lysholm Knee score), anteroposterior stability (Lachman’s test) and rotational stability (Slocum’s test)(p values > 0.05).

Conclusion: Both groups have equally good stability in both the anteroposterior and rotational plane.

Keywords: Transtibial tunnel, anatomical tunnel, non-athlete, ACL injury
Hamstring graft harvest. For ACL reconstruction, tibial tunnel is prepared using a standard jig. The femoral tunnel can be prepared either through the tibial tunnel (Transtibial) or through the anteromedial portal (Anatomical). The advantage of anteromedial portal is the femoral and tibial tunnels are drilled independently of each other, allowing preservation of any remaining intact ACL fibers, allowing isolated reconstruction of the anteromedial or posterolateral bundle. Revision can be done using a new anatomical femoral tunnel and femoral end can be positioned at ideal 10 or 2 o’clock positions ensuring better rotational stability. The advantages of transtibial technique are straight guide wire tunnel, technically easy, Longer and less oblique tunnel giving better AP stability and endobutton is resting on good cortical bone. The disadvantages of anteromedial portal are shorter tunnel hence less AP stability, risk of peroneal nerve injury, femoral tunnel must be drilled with the knee in hyperflexion (130 to 140 degrees), visualization in the notch is obscured when the knee is placed in hyperflexion, due to poor circulation of the arthroscopic inflow fluid and debris from drilling the femoral tunnel and dragging of the fat pad into the femoral notch, technically more demanding, endobutton is resting on the cortex of cancellous bone and working with the knee in hyperflexion causes a loss of the normal anatomical relationships in the notch, leading to spatial disorientation. Advantages of the transtibial tunnel technique are that it is familiar to most surgeons, it is simple and quick and it does not require the knee to be flexed beyond 90° of flexion when the femoral tunnel is drilled. The major disadvantage of the transtibial tunnel technique is that it is not possible to independently drill the ACL femoral tunnel. Anatomical and clinical studies have demonstrated that the transtibial tunnel technique tends to place the tibial tunnel too posterior and the femoral tunnel too high and deep in the intercondylar notch. The purpose of our study was to compare the stability and functional outcome achieved with each technique in non-athletic population.

Materials and methods:

50 patients (39 males and 11 females), all non-athletes with ACL deficient knees underwent ACL reconstruction, 25 by transtibial and 25 by anatomical technique. This was a randomized control trial. All patients were operated by a single surgeon. Patients from both the groups were evaluated on the basis of stability using Lachman’s and Slocum’s tests and functional outcome using Lysholm knee score at 3, 6 and 12 months. The duration of study was 3 years. All surgeries were performed under spinal anesthesia under tourniquet control. Quadrupled hamstring graft (Semitendinosus and Gracilis) was used. The tibial tunnel was prepared using a standard tibial angle guide. The femoral tunnel was drilled either through the tibial tunnel (Transtibial technique) or the anteromedial portal (anatomical technique). The tibial side of the graft was fixed using an interference screw and the femoral tunnel with either interference screw or endobutton. The graft was cycled 15 to 20 times before closure of portals. All patients underwent a same physiotherapy protocol.

Results:

Demographic data was comparable in both groups. The mode of injury and injury to surgery interval was similar in both groups. The length of femoral tunnel was similar in both groups. There was no statistical difference in range of motion at 3, 6 and 12 month. There was no significant difference in the Functional outcome (Lysholm Knee score), anteroposterior stability (Lachman’s test) and rotational stability (Slocum’s test) (p values > 0.05).

Conclusion:

From our study we conclude that:
1) Both groups have equally good stability in both the anteroposterior and rotational plane.
2) Both groups have a good functional outcome in non-athletic group of individuals.

Key Words:
transstibial tunnel, anatomical tunnel, non athlete, ACL injury

Bibliography:

4. Gonzalo Samitier, Pedro Alvarez; Anteromedial portal versus transtibial drilling techniques in ACL reconstruction: a blinded cross-sectional study at two- to five-year follow-up; INTERNATIONAL ORTHOPAEDICS; Volume 34, Number 5 (2010), 747-754.


Management of Diaphyseal Fractures of Long Bones in Children with Intramedullary Flexible Nail Nailing

Vol 1 | Issue 1 | July - Sep 2013 | page 37-41 | Sachdeva G, Kamble S

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Year of Acceptance: 2012
**Abstract**

Background: Ideally, fixation of paediatric diaphyseal fractures should produce an "internal splint" that shares loads, maintains reduction until hard callus formation, and does not endanger the growth areas or blood supply. Results from several studies have shown that FIN / TENS fixation meets these requirements because it allows rapid mobilization, potentially no risk for osteonecrosis, low risk for physeal injury, and reduced risk for refracture. ESIN meets the requirements of this ideal device.

Materials and methods: 31 cases of Diaphyseal fractures in 30 Patients were included. Final outcome was graded excellent, satisfactory or poor based on criteria described by Flynn et al.

Result: The results according to Flynn et al were Excellent in 26 patients (86.67%), Satisfactory in 3 patients (10%), and Poor in 1 patient (3.33%).

Conclusion: Enders nailing is a simple and useful technique for stabilization of Diaphyseal fractures in longbones in children as it permits adequate rotational stabilization.

**Keywords:** Diaphyseal fractures, titanium elastic nail, intramedullary nail, children

**THESIS SUMMARY**

**Introduction:**

Recently there has been a growing trend towards surgical treatment of Diaphyseal fractures in children. To some extent this reflects a more interventionist attitude among Orthopaedic Surgeons but is also due to technical development, notably that of ESIN (Barry & Paterson, 2004). The treatment for children between the ages of 6 and 10 years is the most controversial. Many such patients may be treated successfully with immediate closed reduction & casts. However, external fixation and flexible intramedullary rod fixation are being used more frequently, particularly in patients with multiple trauma. However, in older children and adolescents operative treatment should be considered to avoid complications such as delayed union, malunion, rotational deformity, refracture, knee stiffness, limp length discrepancy and psychosocial problems. Operative treatment results in shorter hospitalization and early mobilization, which has psychological, social, educational and economic advantages over conservative treatment. A variety of therapeutic alternatives mentioned above such as external fixator, compression plating, rigid Intramedullary nailing and elastic stable intramedullary nailing are being used for Diaphyseal fractures in children.

With the use of external fixator, there is a high incidence of pin tract infection, refracture after removal of external fixator. Also the external fixator is more uncomfortable and cumbersome for the child (Linhart & Roposch, 1999). Submuscular Compression plating needs two major operations - one for insertion and another one for the removal of the plate (Gonzalez et. al. 1995). Rigid intramedullary nails have their own pros and cons. They not only increases risk of AVN of femoral head in children and adolescents (Thometz and Lamdan, 1995), but also there is a high incidence of abnormalities at the proximal end of the femur including coxa valga, arrest of growth of greater trochanter, thinning of the neck of the femur because of damage to trochanteric-cervical region.

Ideally, fixation of paediatric diaphyseal fractures should produce an "internal splint" that shares loads, maintains reduction until hard callus formation, and does not endanger the growth areas or blood supply. Results from several studies have shown that FIN / TENS fixation meets these requirements because it allows rapid mobilization, potentially no risk for osteonecrosis, low risk for physeal injury, and reduced risk for refracture. ESIN meets the requirements of this ideal device (Flynn et al. 2001).

Upper age limit for ESIN in Pediatric Diaphyseal fracture is until the time of closure of the proximal growth plate after which conventional rigid locked intramedullary nailing can be used safely. Sanders J.O et al (2001) The choice of treatment may be influenced by the age of the child, the level and pattern of the fracture and to a great extent, by regional, institutional or surgeons preferences.

**Materials and methods:**

This is a Prospective Study based on patients admitted with Diaphyseal Fractures in Long Bones in the age group of 6 years - 16 years. The study was done on 31 cases of Diaphyseal fractures in 30 Patients. All Recent Diaphyseal fracture of Transverse, short oblique, minimally comminuted type were included. Postoperative data collected was no. of nails, postoperative immobilization, period of hospital stay, period of radiological union, return to normal work, any complication, time to nail removal. Radiographs were evaluated for alignment, nail size, nail shape (C or S), callus formation, nail position, and measurement of fracture location. Final outcome was graded excellent, satisfactory or poor based on criteria described by Flynn et al.
Results:
The results according to Flynn et al were Excellent in 26 patients (86.67%), Satisfactory in 3 patients (10%), and Poor in 1 patient (3.33%). Only 3 patients (10.03%) had complication in the form of skin erosion (superficial infection). 23 patients (76.67%) had radiological callus within 8 weeks of operation, while 7 patients (23.33%) had there radiological callus by 12 weeks. 24 patients (80%) had a hospital stay of up to 10 days, while only 6 patients (20%) had a stay of more than 10 days. The geometry of fracture was Transverse (54.80%), Oblique (22.60%) and unicortical comminution (12.90%).

Conclusion:
The following conclusion could be drawn from the present study:
1) Enders nailing is a simple and useful technique for stabilization of Diaphyseal fractures in long bones in children as it permits adequate rotational stabilization.
2) It is suitable for short oblique or transverse fractures and fractures with unicortical comminution. Unstable fractures with long obliquity or significant comminution are not suitable for stabilization with Enders nailing on account of its relatively poor longitudinal stability.
3) Early callus formation and better healing time following use of Enders nail indicates advantages of undreamed nails over plating osteosynthesis and external fixator in fracture healing, especially in fresh fractures.
4) Minimum of two Enders nails with use of both medial & lateral portals is desirable to provide adequate rotational stability and to counteract the angular stresses produced in humerus, femur and tibia. One nail is sufficient in radius & ulna.
5) Significant incidence of distal migration of the nail and knee pain at a later stage is one of the limiting factors of Enders Nail in Diaphyseal fracture in long bones in children which can be prevented by use of a locking 4mm screw / K-wire through the eye of enders nail. However disappearance of symptoms with nail removal does neutralize these problems to some extent, though, one has to wait till sound bony union before the nails can be removed.

Elastic stable intramedullary nailing is an excellent method of managing most, but not all, pediatric diaphyseal fractures that need operative stabilization. It is by no means the only technique nor is there evidence yet that it is superior to other methods. Its advantages make it a valuable choice to consider in managing these fractures. Ultimately, the choice should reflect best evidence and also incorporate patient preferences.

Key Words:
Diaphyseal fractures, titanium elastic nail, intramedullary nail, children

Bibliography:
5. Thometz JG, Lamdan R. Osteonecrosis of the Femoral Head after Intramedullary Nailing of a Fracture of the Femoral Shaft in an Adolescent. JBJS 1995 Sept (9) ; 77-A.


A Comparative Study Of Chlorhexidine-Alcohol Versus Povidone-Iodine For Surgical Site Antisepsis In Clean & Clean Contaminated Cases

Vol 1 | Issue 1 | July - Sep 2013 | page 33-34 | Patil RA, Gaikwad VV, Kulkarni RM

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Abstract

Background: Surgical Site Infections are the third most commonly reported nosocomial infections all over the world. Despite the advances made in preoperative asepsis, patients subjected to operations naturally have to face the risk of complications due to infections. Patient's skin is a major source of pathogens that cause Surgical Site Infection.

Materials and methods: Our study compares the efficacy of Chlorhexidine-Gluconate (2.5%) & Isopropyl Alcohol (63%) to Povidone-Iodine (5%) in preventing surgical site infections in 508 clean and clean contaminated cases. Patients were preoperatively evaluated which included Medical & Surgical history, Physical Examination, Routine hematologic and blood chemical laboratory tests. This study is conducted as a single blinded Randomised control trial.

Results: Our results showed that Surgical Site Infections are significantly less in Chlorhexidine-Alcohol group of patients than in Povidone-Iodine group(9.96% vs 15.95 p<0.05).

Conclusion: Chlorhexidine - Alcohol is more efficacious than Povidone-Iodine in preventing Surgical Site Infections in Clean & Clean Contaminated Cases.

Keywords: Chlorhexidine-Alcohol, Povidone-Iodine, Surgical Site infection
Introduction:
Surgical Site Infections are the third most commonly reported nosocomial infections all over the world [1]. Despite the advances made in preoperative asepsis, patients subjected to operations naturally have to face the risk of complications due to infections. Patient's skin is a major source of pathogens that cause Surgical Site Infection. Povidone-Iodine (5%) has been used for preoperative skin preparation in surgeries since 1955 and is preferred universally. But even then a surgical site infection is a major complication it fails to control completely. Chlorhexidine has been widely used as oral antiseptic solution in mouth washes. Chlorhexidine-Alcohol with its increased efficacy has been recently made available all over as an antiseptic and disinfectant[2]. This study compares the efficacy of Chlorhexidine-Gluconate (2.5%) & Isopropyl Alcohol (63%) to Povidone-Iodine (5%) in preventing surgical site infections in clean and clean contaminated cases.

Materials and methods:
This is a single blind prospective randomized controlled study conducted on 508 patients. Patients undergoing proposed clean & clean-contaminated surgery with no focus of infection on the body were admitted. The study included patients above 18 years of age, undergoing clean & clean-contaminated surgery in department of general surgery and orthopaedics. The study excluded patients with proposed Contaminated and Dirty wounds or patients with history of allergy to Chlorhexidine, Alcohol or Iodophors or evidence of infection at or adjacent to operative site or perceived inability to follow the patients' course for 30 days after surgery or for 1 year in case of implants and patients who did not give consent.

Results:
A total of 740 subjects were randomly assigned to a study group, 352 to the Chlorhexidine–alcohol group and 388 to the Povidone–iodine group (Fig. 1). Of the 740 subjects who qualified for the analysis, 251 received Chlorhexidine–alcohol and 257 received Povidone–iodine. 232 subjects were excluded from the per protocol analysis: 57 underwent Class III (Contaminated) and Class IV (Dirty) rather than Clean and Clean-contaminated surgery. 175 subjects (76 in the Chlorhexidine–alcohol group and 99 in the Povidone–iodine group) did not complete follow-up protocol. Therefore, 508 subjects (251 in the Chlorhexidine–alcohol group and 257 in the Povidone–iodine group) were included in the per-protocol analyses. The subjects in the two study groups were similar with respect to demographic characteristics, coexisting illnesses, risk factors for infection, preoperative antimicrobial prophylaxis and duration and types of surgery.

Conclusion:
The infection rates observed in Chlorhexidine-alcohol and Povidone-iodine in present study were 9.96% and 15.95% respectively. This difference in infection rates is statistically significant. This proves the hypothesis that Chlorhexidine is superior to Povidone iodine. The superiority of Chlorhexidine alcohol can be attributed to its various properties such as Chlorhexidine leaves a protective film whereas Povidone-iodine leaves no film once rinsed off the skin leading to longer residual action. Presence of blood or serum protein does not alter Chlorhexidine-alcohol's bactericidal activity. Chlorhexidine-alcohol has rapid lethal action against both transient and resident flora, especially on anaerobic bacteria. Therefore, it can be safely concluded that Chlorhexidine-alcohol can be used for preoperative skin preparation as an alternative to Povidone-iodine in clean and clean-contaminated surgeries. Since the superiority of Chlorhexidine-alcohol was proved in decreasing incision site colonization and postoperative wound infection, it would be prudent to use this regimen in contaminated and emergency surgeries as well.

Key Words:
Chlorhexidine-Alcohol, Povidone-iodine, Surgical Site infection.

Bibliography:
5. L J Hayek. “A placebo-controlled trial of the effect of two preoperative baths or showers with Chlorhexidine detergent on postoperative wound infection rates.” J Hosp Infect. 10(2); 1987:165-7
Functional Evaluation of Proximal Humerus Fracture Managed by Locking Plate

Vol 1 | Issue 1 | July - Sep 2013 | page 29-32 | Gangurde YS, Mahajan NP, Sonawane DV

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Abstract

Background: Our study is planned to evaluate functional evaluation of proximal humeral fractures treated with open reduction and internal fixation with locking plates in view of range of movement, possible returns of basic functions around shoulder girdle, radiological outcome and resultant remaining disability in the course of healing and after completion of healing.

Materials and methods: Over two and half years 35 patients with proximal humerus fractures were managed With locking plate .34 of them completed mean follow up 11months and evaluated using SPADI score.

Result: Average SPADI score for different fracture type according to Neers classification were suggestive of there is no statistically significant difference between these fracture types managed with locking plate.
We found approximately equal Mean SPADI score in all 2 part, 3 part and 4 part fractures. Overall functional outcome found to be moderate to good in 92% of our patient but 8% patient had poor outcome due to associated complications postoperatively.

Conclusion: Proximal humeral locking plate is an exciting new method of osteosynthesis for complex proximal humerus fractures allowing early mobilization, good functional outcome and is a superior treatment option to hemiarthroplasty.

Keywords: Proximal humerus locking plate, SPADI score.

**THESIS SUMMARY**

**Introduction:**

Fractures of the proximal humerus are representing no more than 3% of all upper extremity fractures and approximately 4% to 5% of all fractures. Three fourths of the fractures occur in older individuals with an occurrence three times more often in women than in men. Severely displaced and comminuted fractures warrant surgical management for optimum shoulder function. Traditional surgical treatment methods include percutaneous or minimally invasive techniques such as pinning, osteosynthesis using cancellous screws, open reduction and internal fixation with proximal humeral plates, and the use of intramedullary nails, hemiarthroplasty. Various complications associated with above methods are implant failure, loss of reduction, non-union or malunion of the fracture, impingement syndrome, and osteonecrosis of the humeral head.

The key to this technology is fixed angle relationship between the screws and plate. Even biomechanical analysis studies have showed the superiority of such locking fixation. Therefore our study is planned to evaluate functional evaluation of proximal humeral fractures treated with open reduction and internal fixation with locking plates in view of range of movement, possible returns of basic functions around shoulder girdle, radiological outcome and resultant remaining disability in the course of healing and after completion of healing.

**Materials and methods:**

Over two and half years 35 patients with proximal humerus fractures were managed. All patients with age between 20 and 60 years and Closed two part post traumatic fracture with major Humeral diaphyseal displacement or three or four part fracture with tuberosity displacement enough to cause significant subacromial impingement were included. They were treated with with locking plate. Patients were evaluated on OPD basis at 6 weeks, 12 weeks, 6 months and 1 year follow up visit standard AP and axillary radiographs were obtained and All radiographs were evaluated for fracture healing, implant related problems- screw perforation, screw loosening or backing out, plate pullout or breakage, anatomical alignment- major varus or valgus and evidence of postoperative osteonecrosis. Functional outcome was assessed using Shoulder Pain And Disability Index (SPADI) score at each follow up done at 6 week, 3 month, 6 month and 1 year. 34 of them completed mean followup 11 months and evaluated using SPADI score. The statistical analysis was done using SPSS 17th Edition.

**Results:**

All fractures united with average time taken for union was approximately 3 months. Average SPADI score for different fracture type according to Neers classification were suggestive of there is no statistically significant difference between these fracture types managed with locking plate.

On comparison with respect to age distribution patients in 6th decade shows comparatively low functional outcome as compare to lower age group. In four patients we have found complications which are screw penetration, impingement, implant failure and infection. We found approximately equal Mean SPADI score in all 2 part, 3 part, 4 part fractures. But Mean SPADI score in 6th decade is on higher side as compare to 3rd, 4th, 5th decade. Overall functional outcome found to be moderate to good in 92% of our patient but 8% patient had poor outcome due to associated complications postoperatively.

**Conclusion:**

We believe that a reproducible standard surgical technique is necessary for improved patient outcome. Proximal humeral locking plate is an exciting new method of osteosynthesis for complex proximal humerus fractures allowing early mobilization, good functional outcome and is a superior treatment option to hemiarthroplasty.

**Key Words:**

Proximal humerus locking plate, SPADI score.

**Bibliography:**

1. J. M. Muthuuri Outcome Of Plate Osteosynthesis In The Management Of Proximal Humeral Fractures In

humerus fractures treated with a locking compression plate and an autologous iliac bone impaction graft.


36. Ricardo Souza e Silva Morelli; Rodrigo Eislter de Souza Travizanuto Proximal humerus fractures: comparative study of two different fixation methods. Acta ortop. Bras. Vol.18 no.2 são paulo 2010 Department of Orthopedics and Traumatology of Hospital Vera Cruz de Campinas. SP. Brazil
41. Jau Agudelo, Matthias Schu’rmann, MD, Philip Stahel, MD, Peter Helwig, MD, Steven J. Morgan, MD, Wolfgang Zeche, MD, Christian Bahrs, MD, Anand Parekh, Bruce Ziran, MD, Allison Williams, MD, PhD, and Wade Smith, MD Analysis of Efficacy and Failure in Proximal Humerus Fractures Treated With Locking Plates. J Orthop Trauma 2007;21:676–681.
44. Felix Brunner,Christopher sommer,Rainer Heuwinkled, George Kohut Open reduction and internal fixation of proximal humerus fractures using a proximal humerus locked plate; A prospective multicenter analysis Journal of ortho. trauma 2009,23,163-172.

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Prevalence and Analysis of Risk Factors of Osteoporosis in Persons of Above 40 Years Age Group in Amritsar – A Study of 500 Cases

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Abstract

Background: In India 61 million people have suffered from osteoporosis; 200% rise in last decade and 50% rise expected in next 10 years. It is a syndrome with many causes and a number of clinical forms. In this study we intend to study prevalence of osteoporosis in the different population groups greater than 40 years age and identify risk factors associated with osteoporosis in them.

Materials and Methods: Five hundred persons of either sex of more than 40 years age group were analyzed with the help of Achilles express (calcaneal ultrasonometer) based upon their -T score. They were screened for various modifiable and non-modifiable risk factors.

Results: It is more common in postmenopausal females. Thin, frail and short people are more prone to osteoporosis. Sedentary life style coupled with increased intake of alcohol and tobacco is important modifiable factors.

Conclusion: Osteoporosis is a silent killer. Prevention is better than cure as prevention requires simple steps such as good dietary habits, active life style, good control of systemic disorders, and reduced intake of coffee, tobacco and alcohol. Proper control of systemic disorder such as diabetes and hypertension helps to control osteoporosis.

Keywords: Osteoporosis, risk factors, elderly, amritsar.

THESIS SUMMARY

Introduction:

Osteoporosis is now recognized as “Silent epidemic disorder”. In India 61 million people (1 in 3 women and 1 in 8 men) have suffered from osteoporosis; 200% rise in last decade and 50% rise expected in next 10 years. An estimated 75 million people in Europe, USA and Japan. In the USA it affects >25 million people, predispose to >1.3 million fractures annually, of which predominantly postmenopausal women. During the course of various bone diseases, common skeletal response is bone loss and it is not surprising that what we call osteoporosis is, in fact a syndrome with many causes and a number of clinical forms. Osteoporosis may be localized or generalized.

The two major determinants of risk in the development of osteoporosis are peak bone mass and rate of bone loss. These two determinants are influenced by a number of genetic and environmental factors. Roughly 70% cases of osteoporosis are probably as a result of genetic predisposition, including the role of genetics in dictating how an individual will respond to exogenous stressors. The remaining 30% of cases...
Materials and methods:

Five hundred persons of either sex of more than 40 years age group were analyzed with the help of Achilles express (calcaneal ultrasonometer) based on their -T score. Detailed history of each person as referred to their Age, Sex and Marital status whether married or unmarried was recorded. Persons were analyzed based upon their residential area whether belong to rural or urban population. Educational level of the person was depicted as illiterate or literate. Those persons who cannot read or write were included under illiterate. Literate persons include those who can read and write. Literate persons further analyzed as under matric, matric plus two, graduate, postgraduate or more based upon their education level. Religion of the person was also recorded as different religions such as Hindu, Sikh, Christian, Mohammedan, Persian, Jain, Buddhist, Yahudi had different dietary habits. Working of the person was recorded as the type of work they were performing to know if the nature of their work was sedentary, medium or heavy work. Persons were also analyzed based upon their economic status which includes family monthly income. Body weight and height of all the persons were also recorded because it also affects the bone mass. Amount of alcohol intake, No. of cigarette per week they were taking also recorded. Blood sugar level of the person all the persons was taken to know whether they belong to Diabetic or Non-diabetic community. Similarly to study the effect of blood pressure level on bone mineral density persons were depicted as Hypertensive or Non-hypertensive groups after recording their blood pressure, normal blood pressure was taken as 130/90 mmHg. To put light on hormonal effect on bone mineral density, reproductivity status of the person especially in case of females was included such as no. of pregnancies, duration of lactation, last pregnancy, abortions if any, Pre/Postmenopausal, contraceptive used or not. Whether differ drugs affect bone mineral density, history of drug intake (corticosteroid, anticonvulsants, heparin, anticoagurers drugs, gluthemide, thyroid hormone, LHRH, GNRH agonists, cyclosporine, methotrexate, lithium ) included as one of the assessment criteria. To ascertain the affect of dietary habits such as vegetarian-those who eat only plant sources without dairy product, lacto-vegetarian-who eat diary product also, ovo- vegetarian- those who eat eggs but no meat and non-vegetarian-those who take meat also and amount of tea/coffee intake on bone mineral density history of specific type of dietary pattern was recorded. Further family history of hip/spine fracture in >40 years age, history of previous surgery/hospital admission, history of previous fracture, history of prolonged immobilization, history of malignancy (multiple myeloma, metastatic bone disease, lymphoma), history of gastrointestinal intolerance, history of radiation therapy, history of connective tissue disease, history of chronic obstructive pulmonary disease, any spinal deformity, any other relevant factor was asked and observations were made accordingly.

Results:

Prevalence was more among females (17.27%) as compared to males (14.86%). Because of majority of females belonged to postmenopausal age group. Postmenopausal females have more prevalence (26.85%) as compared to premenopausal (11.76%) because of estrogen deficiency. Prevalence of osteoporosis was more among urban population (17.67%) as compared to rural (14.0%) because of modern life style adopted by urban population. Prevalence was more among persons practicing sedentary work (22.43%) as compared to medium (12.50%) or heavy work/exercise (3.80%). Increased mechanical stress leads to more stimulation of osteoblasts and hence more bone mineral density. Osteoporosis was more prevalent among Muslim (100.0%) as compared to Hindu (17.77%) and Sikh (14.28%) because of various neural and vascular pathologies occurring in diabetes. Hypertensive persons have more prevalence (20.27%) as compared to non-hypertensive persons (15.49%) because of high urinary excretion of calcium in hypertensive persons. Females as well as males with non-vegetarian dietary habits have less prevalence (14.81%, 11.88%) as compared to lacto-vegetarian dietary habits (18.34%, 17.95%). Females as well as males taking coffee (27.45%, 15.62%) have more prevalence as compared to tea taking (14.98%, 14.73%). Caffeine causes increased urinary excretion of calcium not compensated in 24 hr dietary intake.
Conclusion:
Osteoporosis is a common geriatric problem which can lead to devastating complications if not rectified early. It is more common in postmenopausal females probably due to estrogen deficiency. Thin, frail and short people are more prone to osteoporosis. Besides this bone health is severely eroded by various modifiable factors. Sedentary life style coupled with increased intake of alcohol and tobacco are important modifiable factors. Diet rich in calcium and proteins, reduced intake of caffeine (coffee) and proper control of systemic disorder such as diabetes and hypertension helps to control osteoporosis. Osteoporosis is a silent killer and prevention is better than cure as prevention requires simple steps such as good dietary habits, active life style, good control of systemic disorders, reduced intake of coffee, tobacco and alcohol. So we should organize mass awareness programs both at hospital level and by involving various channels of mass communications such as news paper, radio, television and cinema to highlight these facts. This thing can go a long way in the prevention of osteoporosis and many serious complications like fractures (hip and spine) especially in geriatric patients.

Key Words:
osteoporosis, risk factors, elderly, Amritsar.

Bibliography:
27. Keramat A, Mithal A. Risk factors for osteoporosis in urban Asian Indian women presenting for a


56. Jones D, Hoelscher DM, Kelder SH, Hergenroeder A, Sharma SV. Increasing physical activity and decreasing sedentary activity in adolescent girls - The Incorporating More Physical Activity and Calcium in...


Functional Outcome of Total Knee Replacement in Patients with Rheumatoid Arthritis – A Prospective Study

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Abstract

Background: Total knee replacement in rheumatoid arthritis requires special precautions to be taken because of valgus deformity, more blood loss, osteoporotic bone and systemic nature of disease in our study we intend to study functional outcome of total knee replacement in patients with rheumatoid arthritis. Materials and methods: 34 patients undergoing TKR having rheumatoid arthritis as diagnosis were enrolled. knee society scores done at pre operative period and postoperatively at 3 months, 6 month and 1 year.

Results: We found out that 27 of the 34 patients had excellent functional score, 2 patients had good functional score and 2 patients had fair functional score according to Knee society scoring system at the end of 1 year.

Conclusion: More than 80 percent of patients in our study had excellent functional scores at the end of 1 year. Total knee replacement is good surgical option for rheumatoid arthritis of knee.

Keywords: Rheumatoid knee, total knee replacement, functional outcome.
THESIS SUMMARY

Introduction:

The functional outcome for total knee replacement in knee arthritis has been declared excellent, most of the studies done have been for primary osteoarthritis. The available literature for total knee arthroplasties in patients with rheumatoid arthritis is very limited and almost nil specifically for Indian population. Rheumatoid arthritis is a disease which has few features inherent to it that are separate from primary degenerative osteoarthritis, characteristics commonly seen in rheumatoid arthritis are valgus deformity, juxtaarticular osteoporosis, systemic involvement of musculature, upper extremity involvement which affects rehabilitation, reduced immunity leading to wound healing problems, severe anemia which causes general malaise, younger age at presentation and ipsilateral hip involvement. We believe these characteristics may influence the surgery during total knee arthroplasty and the functional outcome of the surgery. Hence we carried out this study to assess the functional outcome of total knee replacement in patients with rheumatoid arthritis.

Materials and methods:

The subjects in the study were patients with rheumatoid arthritis who underwent total knee replacement. The diagnosis of rheumatoid arthritis was made based on criterion given by American association of rheumatologists. All the patients in the study were positive for rheumatoid factor. Our study consisted of 34 patients. 28 patients were females and 6 patients were males. The age range of the patients was 40-75 and mean age was 57.6 years. Our patients were from both urban as well as rural background. Baseline scores were measured preoperatively. The patients were followed up regularly for a period of 1 year with knee society scores done at pre operative period, 3 months post operative period, 6 months post operative period and 1 year. As a routine we do cruciate retaining type of total knee arthroplasty at our hospital. However when the patients have valgus deformity of more than 20 degrees or fixed flexion deformity of more than 40 degrees we prefer to do cruciate sacrificing type of total knee arthroplasty. In our study of 34 patients we had 5 patients who underwent cruciate sacrificing type of total knee arthroplasty either because of severe deformity, ligamentous instability or difficulty in soft tissue balancing.

Results:

Patients with total knee replacement has excellent outcome in patients with rheumatoid arthritis. More than 80 percent of patients in our study had excellent functional scores at the end of 1 year. Age of the patient at the time of presentation doesn't have direct linear correlation to functional outcome. The patients in the younger age group had better functional scores than the older age group, however the mean improvement in functional scores was similar in all age groups. Weight of patient also did not show direct linear correlation to functional outcome. Patients in different weight groups showed similar mean improvement in functional scores. However, the morbidly obese patients took longer time to achieve better functional scores when compared to the others. The associated comorbid conditions such as Diabetes mellitus, Hypertension and Coronary artery disease did not influence the functional outcome of the surgery per se. The data in our study group showed significant difference in functional outcome after total knee arthroplasties between the 2 groups. The group where PCL was retained had superior clinical and functional scores compared to the group where PCL was sacrificed. However the difference was more significant in functional scores than clinical scores. Patelloplasty was done in all the patients who underwent total knee arthroplasty in our study.

Conclusion:

In our study we observed and analysed the data of 34 patients with rheumatoid arthritis who underwent total knee arthroplasty without patellar resurfacing. All the patients were evaluated according to knee society scoring system. 3 patients were lost for follow Up in our study at the end of 1 year. we found out that 27 of the 34 patients had excellent functional score, 2 patients had good functional score and 2 patients had fair functional score according to Knee society scoring system at the end of 1 year. Total knee arthroplasty in patients with rheumatoid arthritis is a "good surgical option" with about 80 percent of people having "excellent" functional outcome according knee society scoring system.

Key Words:
Rheumatoid knee, total knee replacement, functional outcome.

Bibliography:


An Interventional Randomized Study to Evaluate a new Supraglottic Airway Device (I-gel) in Comparison with the Classical LMA

Vol 1 | Issue 1 | July - Sep 2013 | page 17-19 | Chandura RA, Kantharia BN, Shah PK

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Abstract
Manoeuvres for airway manipulation like jaw lift, adjusting head and neck position and twisting, rotating or possible in 27 patients while 2 patients required 2 attempts and 1 patient required 3 attempts for insertion.

C.Insertion of I-gel was possible in single attempt in all 30 patients whereas, in the LMA-C group it was

The insertion of the I-Gel required less attempts and less airway manipulation as compared to LMA-(p>0.05), chest compliance and ease of IPPV were adequate in both the groups.

There was no statistically significant difference in SpO2, EtCO2 and they remained within normal limits observation period (p>0.05).

it was higher for the LMA-C group. The MAP was comparable in both the groups throughout the

insertion (p<0.05) and in mean diastolic pressure, it was significant at 5 min after insertion (p<0.05), where I-Gel group (p<0.05). The difference in mean systolic blood pressure was significant at 1 & 3. min after insertion.

A significantly higher pulse rate was noted in LMA-C group at 3 min following insertion as compared to the I-Gel group (p<0.05). The difference in mean systolic blood pressure was significant at 1 & 3. min after insertion (p<0.05) and in mean diastolic pressure, it was significant at 5 min after insertion (p<0.05), where it was higher for the LMA-C group. The MAP was comparable in both the groups throughout the observation period (p>0.05).

There was no statistically significant difference in SpO2, EtCO2 and they remained within normal limits (p>0.05), chest compliance and ease of IPPV were adequate in both the groups.

The insertion of the I-Gel required less attempts and less airway manipulation as compared to LMA-C. Insertion of I-gel was possible in single attempt in all 30 patients whereas, in the LMA-C group it was possible in 27 patients while 2 patients required 2 attempts and 1 patient required 3 attempts for insertion. Maneouvres for airway manipulation like jaw lift, adjusting head and neck position and twisting, rotating or

Introduction:

Supraglottic devices are useful advent in the airway management, filling a niche between the facemask and tracheal tube in terms of both the anatomical position and the degree of invasiveness. It is easy to insert them blindly in to the hypopharynx to form a seal around the larynx and has an important role in the management of difficult intubation and failed intubation. Laryngoscopy and muscle relaxation are not necessary for the insertion of supraglottic device. As it avoids invasion of vocal cords, incidence of injury inside the oral cavity and the occurrence of sore throat also decreases. These devices are better tolerated than the tracheal tube at ‘lighter’ levels of anaesthesia and have minimal cardiovascular response. They can be inserted in awake as well as anaesthetized patients with or without using muscle relaxant. The I-Gel is a new, single use, non-inflatable supraglottic airway for use in anaesthesia during spontaneous or intermittent positive pressure ventilation. The shape, softness and contours accurately mirror the perilaryngeal framework itself and create the perfect fit. As it has no inflatable cuff, it has several potential advantages including easier insertion, minimal risk of tissue compression, stability after insertion and an integrated gastric channel is provided for gastric suction for passage of nasogastric tube to empty the stomach. The objective of our study was to compare two supraglottic devices, classic LMA and I-Gel for ease of insertion, position within the airway, ease during mechanical ventilation, hemodynamic parameters before, during and after insertion and postoperative complications in anaesthetised patients undergoing elective surgical procedures.

Materials and methods:

Sixty patients of either sex in the age group of 18-60 years were selected randomly. Patients were divided into two groups comprising of thirty patients each and comparison was made between LMA-C Classic and I-Gel supraglottic device. In group 1, I-gel and in group 2, LMA-C was inserted. The hemodynamic stability, ease of insertion, number of attempts & time required for insertion and airway manipulation required for insertion were noted. After insertion, pulse rate, systolic blood pressure, diastolic blood pressure, mean arterial pressure, SpO2 & ETCO2 were noted at different time intervals. Anesthesia was maintained with 66% N2O with O2 and Isoflurane 0.5 -1% and muscle relaxation was provided with vecuronium. Insertion of nasogastric tube was done through the gastric channel of the I-gel using appropriate size of nasogastric tube.

Adequacy of oxygenation was determined as SpO2 >95% and adequacy of ventilation was defined as ETCO2 between 30-40 mmHg. At the end of surgery, neuromuscular blockade was reversed with Neostigmine 50 mcg/kg and Glycopyrrolate 8 mcg/kg IV. After suctioning from the hypopharynx and once the consciousness was regained, patients were asked to open their mouth and device was removed after the protective reflexes had returned.

The devices were examined for the presence of blood on it and any adverse events occurring post-operatively were noted. The statistical analysis was done using EPI INFO software using the “two tailed students' t test for unequal variance,” the difference was considered to be statistically significant when p<0.05 and highly significant when p<0.01.

Result: I-gel is better than LMA in all parameters measured with fewer complications.

Conclusion: I-Gel can be used as a better alternative to the LMA-C.

Keywords: Randomized controlled trial, I-Gel, LMA-Classic, supraglottic airways
reinsertion of the device were not needed in 20 patients of I-Gel group and one manoeuvre was needed in remaining 10 patients. In the LMA-C group, 8 patients did not require any airway manipulation, 17 patients needed one, 2 patients needed two and 1 patient needed three manoeuvres. I-Gel was easy to insert in 100% patients as compared to 73.33% patients in LMA-C.I-Gel required less time for insertion (8.26±2.88 sec) as compared to the LMA-C (25.13±31.71 sec).

One patient of the I-Gel group developed bradycardia (pulse< 60/min) intra operatively. I-Gel insertion was associated with less post-operative complications like sore throat (3.33%) as compared to the LMA-C (20%). I-Gel did not show staining of device with blood and tongue, lip or dental trauma whereas; it was seen in 13.33% and 10% of the patients of the LMA-C group respectively. None of the patients in the I-Gel group experienced cough, hoarseness of voice and vomiting whereas, it was seen in 6.66%, 3.33% and 6.66% of the patients of the LMA-C group respectively.

Conclusion:
Thus it can be concluded from the study that the I-Gel is easy to insert with less airway manipulations, requiring less time and attempts for insertion, maintaining better hemodynamic stability following insertion and causing less post-operative complications compared to the LMA-C.

The I-Gel can be used as a better alternative to the LMA-C.

Key Words:
randomized controlled trial, I-Gel, LMA-Classic, supraglottic airways

Bibliography:
11. Carin A. Hagberg Comparison of I-Gel to the laryngeal mask airway Clinical trials.gov, university of Texas medical school at Huston, 2011.
The Evaluation of Intrathecal Morphine for Post Operative Analgesia in Vaginal Hysterectomy

Vol 1 | Issue 1 | July - Sep 2013 | page 14-16 | Trivedi DA, Patel H, Shah PK

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Abstract

Background: A prospective randomized study was undertaken to evaluate the efficacy of intrathecal morphine along with bupivacaine for post-operative analgesia in patients undergoing vaginal hysterectomy. Materials and methods: The study was conducted on 80 female patients in the age group of 18 to 60 years, belonging to ASA grade I to III scheduled for vaginal hysterectomy. Patients were randomly divided in to two equal groups, one receiving morphine (group M) and other normal saline (group B). Baseline pulse rate, blood pressure, respiratory rate, Visual analogue scale and sedation score were recorded & monitored at regular intervals.

Result: Respiratory rate & Oxygen saturation remained normal in both groups. Fall in pulse rate was more in group M Blood pressure was lower in group M as compared to group B. Higher sedation score in group M, sensory and motor blockade achieved was faster in group M with improved VAS score and less serious
Conclusion: We thus conclude that intrathecal administration of 0.1mg preservative free morphine along with 0.5% bupivacaine (17.5mg) significantly prolongs the duration of post-operative analgesia up to 14 hours. It also reduces post-operative analgesic requirement in first 24 hours.

Keywords: Intrathecal morphine, spinal anesthesia, vaginal hysterectomy.

**THESIS SUMMARY**

**Introduction:**

Intrathecal morphine has been one method of providing postoperative pain relief for more than two decades. Morphine, which is more hydrophilic than other opioids, has a longer residence time in the CSF and therefore may reach rostral sites over a longer period than other opioids. The basis of this is related to the location of opioids receptors in the substantia gelatinosa of the spinal cord. Opioid receptor activation inhibits the presynaptic release and postsynaptic response to excitatory neurotransmitters from nociceptive neurons. Transmission of pain impulses are interrupted at the spinal cord level. Consequently, there is a potential of achieving adequate and long-lasting analgesia with an intrathecal injection of morphine. However, the downside of this hydrophilic character is an increased risk of adverse effects, especially delayed respiratory depression. By providing good analgesia for an extended period, intrathecal morphine considerably reduces the systemic opioids requirement. The side effects associated with intrathecal morphine are pruritus, sedation, nausea, vomiting and delayed respiratory depression which warrants close monitoring of the patients for the first 24 hours. Some of the side effects can be reversed with naloxone. This study was undertaken to evaluate the efficacy of intrathecal morphine added to bupivacaine spinal anaesthesia in patients undergoing vaginal hysterectomy with regard to onset and duration of anaesthesia, haemodynamic effects, postoperative analgesia, sedation, and occurrence of any side effects.

**Materials and methods:**

A prospective randomized study. The study was conducted on 80 female patients in the age group of 18 to 60 years, belonging to ASA grade I to III scheduled for vaginal hysterectomy. Patients were randomly divided into two equal groups.

They received intrathecal drugs as follows.

In pre anaesthesia room, pulse rate, blood pressure and respiratory rate were noted & patients were preloaded with 1 litre of crystalloids and premedicated with inj glycopyrrolate 0.004 mg/kg and inj odansatron 4 mg intravenously.

In operation theatre, lumbar puncture was performed under strict aseptic and antiseptic precaution in the lateral decubitus position at the level of L3-4 or L2-3 inter space using 23G or 25G number spinal needle. After ensuring free flow of CSF, study drug was injected. The time of intrathecal injection was noted and immediately after it patients were turned to supine. Baseline pulse rate, blood pressure, respiratory rate and sedation score (ramsay scale) were recorded & monitored every 5 minutes up to 30 minutes, at 45 minutes, 60 minute, 120 minute, 150 minute, 3h, 4h, 5h, 6h, 9h, 12h and at 24 hour. Visual analogue scale for pain was recorded at 1h, 2h, 3h, 4h, 5h, 6h, 9h, 12h and at 24hrs. Sensory blockade was assessed after injection of the drug to complete ablation of pinprick test. Motor blockade was assessed by bromage scale. Post-operatively rescue analgesia was supplemented with inj diclofenac sodium 1.5 mg/kg intramuscularly when VAS score > 3. Patients were observed for side effects like hypotension, bradycardia, respiratory depression, nausea, vomiting, urinary retention and itching.

**Results:**

The age and weight of the patients and duration of surgery were comparable in both the groups (p > 0.05). A fall in pulse rate was more in group M as compared to group B but it was statistically significant (p < 0.05) only during 120 minutes to 5 hours after intrathecal injection of the drug. The lowest values of pulse were seen between 90-120 minutes in group M and B. Blood pressure was lower in group M as compared to group B during whole study period but did not reach statistical significance (p > 0.05). The lowest values of blood pressure were seen between 90-120 minutes in group M and B. Respiratory rate & Oxygen saturation remained normal in both groups at all time intervals during surgery and for 24 hrs postoperatively. (p > 0.05). Higher sedation score in group M as compared to group B from 25 minutes after intrathecal injection of the drug up to 6 hours (p < 0.001). During this period, the patients were easily aroused but asleep when not disturbed. In the rest of period, the sedation score was comparable with group B (p > 0.05). The mean time of sensory blockade from intrathecal injection to onset of sensory analgesia at T1 level was 1.169 ± 0.731 minutes in group M and 1.806 ± 0.952 minutes in group B (p < 0.05). In both groups highest sensory level achieved was T4 – T8. The mean time to achieve highest sensory level was 5.950 ± 2.490 minutes in group M and 6.400 ± 3.078 minutes in group B (p > 0.05). The mean time of motor blockade from intrathecal injection to onset of grade 3 motor block was 5.0 ± 1.536 minutes in group M and 5.400 ± 1.905 minutes in group B (p > 0.05). The mean duration of motor block was 207.750 ± 23.176 minutes in group M and 214 ± 25.201 minutes in group B (p > 0.05). VAS score was
higher in group B as compared to group M at all time intervals except at 12th hours (p < 0.001), as by that
time all patients in group B had already received rescue analgesia. In group M, 8 patients (20%) did not
require analgesic on the day of surgery. The average duration of analgesia was 13.825 ± 4.206 hours in
group M and 4.762 ± 0.679 hours in group B (p < 0.001). Total number of rescue analgesic doses required
were significantly less in group M (1.225 ± 0.480 injections) as compared to group B (2.65 ± 0.580
injections) (p < 0.001). Intra-operatively, bradycardia occurred in 17.5% of patients in group M and 2.5% of
patients in Group B, it was treated with inj atropine sulphate 0.6 mg intravenously. No patient developed
hypotension which required treatment. 37.5% patients in group M and 15% patients in group B developed
nausea and vomiting (p < 0.05). 37.5% patients in group M developed pruritus while no patients in group B
developed pruritus (p < 0.001). No patients in any group developed respiratory depression.

Conclusion:
We thus conclude that intrathecal administration of 0.1mg preservative free morphine along with 0.5%
bupivacaine (17.5mg) significantly prolongs the duration of post-operative analgesia up to 14 hours. It also
reduces post-operative analgesic requirement in first 24 hours. It leaves the patient calm, comfortable,
minimally sedated though easily arousable during intraoperative and immediate post operative period
without any serious adverse effects except vomiting and pruritus which is easily treatable.

Key Words:
Intrathecal morphine, spinal anesthesia, vaginal hysterectomy.

Bibliography:
1. Almeida RA, Lauretti GR, Mattos AL. Antinociceptive Effect of Low-Dose Intrathecal Neostigmine
   Morphine With or Without Clonidine for Postoperative Analgesia After Radical Prostatectomy. Anesth
4. Collins VJ. Principles of anaesthesiology, general and regional anaesthesia, 3rd edition: 1993; Vol2:
   1317-1346, 1571-1605, 1232-1316.
5. Gehling M, Tryba M. Intrathecal morphine in orthopaedic surgery patients, Optimised dose in patients
6. Gwirtz KH, Young JV, Byers RS, Alley C, Levin K, Walker SG. The Safety and Efficacy of Intrathecal
   Opioid Analgesia for Acute Postoperative Pain: Seven Years’ Experience with 5969 Surgical Patients at
7. Hassett P, Ansari B, Gnanamoorthy P, Kinirons B, Laffey J G. Determination of the efficacy and side-
   effect profile of lower doses of intrathecal morphine in patients undergoing total knee arthroplasty. BMC
   Anesthesiol, 2008; 24: 8-5.
   morphine effects on post-hysterectomy pain: a randomized placebo-controlled study. Acta Anaesthesiol
10. Kamath S S, Hosagoudar P, Ambareesha : Comparison of Efficacy of Intrathecal Morphine 100µg
    and 200µg for Postoperative Pain Relief in Patients Undergoing Lower Abdominal and Lower Limb Surgeries, J
11. Kirson LE, Goldman JM, Slover RB. Low-dose intrathecal morphine for postoperative pain control in
14. Marion EK, Hansen K, Tegerstedt G E, Svensen C H, Andrijauskas A, Drobin D. Spinal blocks with and
    without morphine in women undergoing hysterectomies - a randomized study. Sri Lankan Journal of
15. Miller RD. Chronic pain, Local anaesthetics, Spinal anaesthesia: Anaesthesia Textbook, 2006; 6th
    morphine and bupivacaine for elective post-caesarean pain. Masui, the Japanese journal of


31. Yang T, Breen T W, Archer D, Fick G. Comparison of 0.25 mg and 0.1 mg intrathecal morphine for analgesia after Cesarean section. Can J Anesth, 1999; 46(9): 856-860.


Guest Editorial : Dr Hrutvij Bhatt

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Medical thesis is the one of the most important and the very first step of all medical students' life towards basic research. During our training all students are assigned one specific subject or problem and prepare a thesis on that subject. Preparing thesis which is sometime considered a formality or a herculean task by medical students and often wonder why it’s a compulsory part of our curriculum. Basically thesis writing is the first step and an important exercise to train us about research. Every year more than six to seven thousand medical thesis are been written in our Country. However very few (less than 10%) see the light of publication. A lot of them do not get published in mainstream journals, as authors feel it is not good enough or there are lacunae or there are issues with the designing of the study. However all thesis do involve collection of data which has potential to answer a question. If we consider these numbers then we can imagine how much important data do not get the light of publication.
Even if the thesis has a small learning point or a small practical or statistical point to make, we feel it is worth publishing. Journal of Medical thesis is an attempt to fill up these lacunae and provide a platform for publication of the more and more medical thesis in form of publications.

Journal of Medical thesis is unique Journal dedicated to publishing medical thesis all across the globe. It is an initiative of International Organisation of Research Groups through the Indian Orthopaedic Research group.

JMT will not only provide an opportunity to students to publish the medical thesis and get credit to themselves and their teachers, but will also help to reduce the plagiarism. In addition to being a Journal, JMT is also envisioned to be a platform where thesis can be discussed and help regarding Thesis can be provided. Through JMT we will be trying to improve the standard of thesis and research in our country. JMT will also like to thank the Editorial board members who believed in our idea and supported us when we were putting our first steps.

And as I conclude with each and every drop of water makes a mighty ocean likewise each thesis work getting published can add to important data which can be very helpful for various meta analysis and systemic reviews.

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