

BREAKING NEWS

Newsletter of the New Zealand Orthopaedic Nurses Association (N.Z.O.N.A)



Editorial note...

Contact: Lynley Papadopoulos
papafam@ihug.co.nz

Hi everyone,

Welcome to this issue of Breaking News.

The end of the year is nearly here. I suspect that most people are in the midst of Christmas and New Year preparations. I was out in Sylvia Park mall on Auckland today, it was crowded and noisy. After 3 hours I had to call it quits and go home, I like my peace and quiet!!

Many thanks to those who voted recently to change our AGM to July in line with the business year. Our current officers have agreed to stay on in their roles until that time.

I trust that you all found a way to celebrate orthopaedic nursing on October 30th.

An exciting development in fracture management was reported on the news tonight, the use of stem cells (extracted from the patient's bone marrow) were mixed with a substance then injected into the fracture sites to facilitate healing. This particular individual had multiple fractures and was at risk of losing his leg. All his fractures but one are completely healed. The remaining one has callus formation. This shows that science is continually developing and discovering new treatment options. It will be interesting to keep an eye on this and see how it develops.

I want to take this opportunity to wish you all a Merry Christmas and Happy New Year. If you are fortunate enough to have time off, please keep safe and relax.

Regards,

Lynley Papadopoulos

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child also has challenges. Other fixation methods are External Fixators or rigid nails. These days Titanium Elastic

Report on the 9th Wellington Orthopaedic Nursing Conference- The Paediatric Challenge Orthopaedic & Trauma 11th & 12th September 2009, Submitted by Diane Lanting from Waikato DHB.

The conference started on 11th September with the first presentation by **Judith Swift** who is a Staff Nurse in the orthopaedic clinic at Wellington Hospital. She spoke about Elbow trauma - specifically supracondylar fractures which is a common injury in children and how to diagnose and treat these injuries. This was a good update on the reasons why the fractures are either treated conservatively or operated on to get the best outcome for the child.

The next speaker was **Dr Giresh Kanji** who is a Musculoskeletal Pain Specialist who had an interesting talk about referred and widespread pain in children. He talked about how often it is the simple treatments that work the best without a lot of intervention but frequently by the time he sees the children they have had many investigations and tests to try and find out what is causing the pain usually without success.

Barbara Day who is a paediatric physio at Wellington hospital then talked about the need for good preparation of the child and caregivers for a child coming into hospital for elective surgery. She gave us good ideas to think about how the planned surgery is going to affect how the child is cared for after surgery such as what will change, either in how they can sit or transfer from bed to chair. Also do they need a new or different mobility aid. Will they still be able to attend preschool or school? In Wellington the children are preadmitted so are assessed by Physiotherapists and Occupational therapist so any equipment that is required can be obtained prior to the surgery thus allowing good discharge planning.

With physio timing is everything- pain management is vital. Practice makes perfect and better safe than sorry-sometimes another day of practice makes all the difference.

John Mutu-Grigg Orthopaedic Registrar at Hutt hospital then talked about the many different types of femoral fractures and how to treat them. He talked about the different sites of fractures starting with proximal fractures which are then divided into transepiphyseal, transcervical, cervico-trochanteric and intertrochanteric. With transepiphyseal the best treatment is gentle closed reduction, then fixation with smooth pins and a hip spica. These injuries have a high incidence of avascular necrosis of the femoral head which then needs to be treated. Transcervical and Cervicotrochanteric are treated in a similar manner. Diaphyseal fractures are the most common site of a femoral fracture in children and there is now moderate evidence to suggest operative treatment reduces adverse outcomes for these fractures. The use of traction is decreasing with skin or skeletal traction now usually a temporary measure until operative treatment can take place. Hip spicas can be used in the preschool child that can be carried but these can be challenging to put on and caring for the

Nails (TENS) seem to be the preferred method of fixation with decreased malunion and total adverse effects. The child can mobilise after the operation being touch weight bearing for 4-6/52, then increasing as tolerated. The nails are removed after one year. Supracondylar fractures are difficult to control with traction and are operated on. Physal injuries can lead to deformity in the limb due to damage to the growth plate and require ongoing follow up for at least 2-3 years following treatment.

The Orthotists from Wellington went over the different types of orthoses that are available to use with children and discussed some of the difficulties getting children to comply with and use the devices that are supplied.

The next topic covered was Perthes disease by **Mr Tim Gregg** Orthopaedic Paediatric surgeon at Wellington. Perthes disease is osteonecrosis of the femoral head in a growing child. It is of unknown aetiology and is more common in males with the age of onset between 4-7 years. The condition often occurs in both sides. It has a variable outcome and there is a higher risk in Caucasians. There is a family history and skeletal immaturity is another factor. There can be an insult to the area such multiple ischaemic episodes and possibly trauma. The children present with a limp and pain associated with activity. Sometimes the pain is in the knee. When x-rayed there is sclerotic changes from 6-12 months after the onset of the limp with widening of the joint spaces. The next stage is fragmentation with revascularisation of the femoral head which is from 12-24 months. The head appears radiolucent due to bone resorption. at this stage the femoral head is soft and can deform and get extruded from the acetabulum. Re-ossification occurs from 6-24 months and healing occurs from 24-48 months. Remodelling continues until skeletal maturity.

There are different methods of classification depending on the amount of head involvement. The outcome depends on the age of presentation and the degree of lateral pillar involvement.

The treatment is firstly symptomatic to decrease irritability and maintain range of movement. The main aim is to contain the femoral head in the acetabulum, with either non-operative or operative measures. Pain occurs at the initial fragmentation stage so rest, use of non steroidal medication and gentle traction is used. Crutches are used as a short term measure but only a short period of non weight bearing is needed. Encouragement of full range of motion exercises with physiotherapy and hydrotherapy information is shared.

C-Condition/consult/consider

H-History of injury and time

I-Injury and investigation

L-Location

D-Description, developmental level,
documentation

may be needed. Sometimes gait retraining is also needed.

Surgical intervention to improve containment of the femoral head in the acetabulum is needed. This involves either a femoral or pelvic osteotomy which should be done early before the femoral head becomes deformed. If surgery is done when the child is under 6 years the outcome is good but overall the outcome depends on the age of presentation, the amount of femoral head containment and the amount of lateral pillar involvement.

Juvenile Idiopathic Arthritis (JIA) was the next topic covered by **Priscilla Campbell-Stokes** who is a Paediatrician And Paediatric Rheumatologist at Hutt Hospital. Arthritis is diagnosed by a persistent joint swelling in a child before the age of 16 in the absence of any defined cause lasting more than 6 weeks. There are about 80 new cases a year and these children are not just small adults. 95% have a disease which is clinically and immunogenetically distinct from Rheumatoid Arthritis in adults. They present with joint pain, stiffness, swelling, instability and sleep disturbance. Investigations to rule out other causes of these symptoms need to occur before the diagnosis is made. The majority of cases only have one joint involved but up to a third can have a polyarthritis. JIA is more common in females and predominantly in the lower limbs usually the knee. More than 2/3 have remission by adulthood.

Management is by the use of non steroidal medications and intra-articular steroid injection directly into the affected joint. Education is another part of the management.

The next topic covered was Pain, Distraction and Comfort Positioning by **Jo Griffin** who is a clinical nurse specialist Paediatrics at Wellington Hospital. This was a very interesting talk about how to best to deal with a child when a procedure need to done that will cause the child some pain. The key is to divert the attention of the child away from the procedure and onto something else. Also be truthful if you want to keep the trust of the child. Emotions play a significant part in the perception of pain. There is trauma, fear, separation anxiety and loss of control.. Pain is not exclusive to physical insult of the nervous system but can also be emotional and anticipatory. Distraction is not a replacement for pharmacological pain relief.

Age appropriate information needs to be given by using humour and distraction. The nurse needs to work together with the child and relatives to ensure a stress free procedure. Avoid entering into negotiation with the child and don't put of the inevitable. Parents and the way they respond to the given situation has a large impact on the way the child will react. Children pick up on the parents' anxieties and fears. Nurses need to explain the difference between feelings and hurting to a child who can understand the difference. Get the parents to concentrate on distracting their child by reading a story or blow bubbles etc.

Comfort positioning is done by the carer providing support and security for the child with close physical contact and positive assistance during and after the procedure.

The last topic of the day was about Non-Accidental Injuries by **Bonnie Fordham** Child protection coordinator Wellington Hospital. The main message from this talk was we all need to be aware and have a collaborative approach with a multi-agency assessment where

R- Risk-none, immediate, emanate

E- Eye witness, escort and examination result

N-Notification

Saturday 12th September started with **Professor Alan Thurston** from Wellington talking about Syndactyly or webbed fingers. This condition can also affect toes. This was interesting because at Waikato these hands are treated by Plastic surgeons. There are many degrees of syndactyly which can be simple which just involves the soft tissue only through to complex involving boney fusion. There is also complicated syndactyly with varying degrees of involvement with either curved fingers, fixed flexion deformity, fused phalanges or short & fused. In complicated syndactyly there is need for an arteriogram to ensure adequate blood supply to all fingers after separation. This condition has a 2:1 ratio of males: females. It occurs about 1/2000 births and 50% are bilaterally affected. There can be associated abnormalities such as Apert syndrome where there are craniofacial abnormalities caused by the premature closure of the skull sutures.

Management of the condition depends on whether the child has any other severe abnormalities or mental retardation or has complex syndactyly with deficient arteries or tendons. If the surgery is undertaken at about 18 months of age then fewer revisions need to be done. If the thumb is involved then early separation is needed to allow for prehension and the fingers should be separated before starting school. If both hands are involved surgery should be done on both hands at the same time to reduce anaesthetic episodes. Different techniques are employed but a zigzag incision is made and there is usually insufficient skin to cover the defects so sometimes skin grafts are needed. Dressings are left on for 14 days and then removed at clinic and the hand then splinted to allow healing.

Jane Bertshinger an Occupational therapist with an interest in hand therapy talked about and showed us many different splints that can be used and how there is often need for innovative thinking to get compliance with the use of these.

Slipped Upper Femoral Epiphysis was the next topic by **Dr Nigel Hartnett** Orthopaedic Registrar at Hutt Hospital. negative emotion and they can use it to escape or externalise other causes. They also use it to vent frustration and relieve emotional pain. It mean they can feel something.

The last topic was Osteomyelitis in children by **Aman Singh** Orthopaedic Registrar at Wellington. Osteomyelitis is more common in males than females and occurs 1/5000(< 13 years of age).It is more common in Maori or Polynesians and there is seasonal variation and also lifestyle and nutrition play a part. The onset involves a

It is a deformity caused by superior migration with adduction and external rotation of the epiphysis. The condition can usually be diagnosed from the history and examination with confirmation by x-ray. The condition is more common in males and 60% present with L) sided slip. Over 50% are classified as obese and it is more common in Maori and Pacific Islanders. There are 2 reasons for this. The mean body weight for the ethnic group is higher and there is racial variation in acetabulum cover. 82% with a SUFE will represent with a contralateral slip within 18 months. These children present often with a painless limp or else have knee and thigh pain. They have decreased range of movement and a family history.

The slip is classified as stable which means the child is allowed to weight bear either with or without crutches. If the slip is unstable the child is unable to weight bear so either uses crutches or a wheelchair. Is important that both an AP pelvis and a frog leg lateral view are done on x-ray as 14% of slips are not seen on an AP pelvis. The goals of treatment are early detection and prevention of further slippage. These children and their parents need education about the chance of the other side slipping in the future. Treatment involves pinning of the slip insitu with usually a single pin ensuring the pin is placed in the epiphysis and not into the joint. If there is a severe slip insitu fixation is difficult so an osteotomy may need to be performed.. Postoperatively these children need to Touch Weight bearing for 6 weeks. Crutches can used if only one hip is affected otherwise a wheelchair is needed. The children also need to be followed up until they reach skeletal maturity.

Our next topic covered was by a **parent of a patient** with Apert's syndrome and all the challenges that living with a child with the syndrome entails. It was very interesting to have a parent's perspective on what we as nurses are doing well and what we could do better.

A highlight of the whole conference was the next talk by **Professor Benjamin Joseph** from Waikato on Paediatric Orthopaedics-is it the same the world over. Drawing on his own experiences in India it was fascinating to learn that he has been innovative and able to think of alternatives to expensive drugs and equipment which are not readily available. Also cultural and religious considerations need to be considered prior to embarking on any surgery.

A spinal case study was presented by **Tina Rawlings-Nurse** Specialist Paediatrics at Starship Hospital. She talked about types of injuries mainly to the cervical spine either by fracture or ligament injury. There can be spinal cord injury without a radiographic injury. In infants they have a larger head so upper cervical injuries occur. in older children midcervical injuries are more common. At Starship these children will sometimes have fixation followed by application of a Halo fixation. In the smaller children the halo is incorporated into a hip spica. When a halo is applied on a child more pins are used so there is less torque on each pin. Care of the pinsites is important and pinsite infections need to be treated promptly.

Adolescent deliberate selfharm was the next topic covered by **Jessica Garisch** from Victoria University. The adolescent can have maladaptive outcomes with physical and psychological causes and can also be secretive about the selfharm. This also generates replacement patients. The trials showed that Pradaxa was as effective

pathogenesis and is either acute with a < 2 week history or Subacute > 2 week history. Chronic is when it is recurrent and leads to sinus tracts and necrosis.

The most common sites are the femur, tibia and humerus at the metaphysis. Symptoms include pain, fever/chills, lethargy, poor appetite and swelling. Investigations include bloods, x-ray, aspiration to exclude septic arthritis and bone scan or MRI if deemed necessary. Treatment is usually non-operative with fluids, antibiotics, rest and immobilisation in a cast if necessary. Surgical intervention is needed if there is a subperiosteal abscess or soft tissue abscess. Osteomyelitis can recur and become a chronic condition leading to growth plate injury and pathological fractures. It is still a serious condition and needs to be treated early and adequately and have close follow-up to detect any early recurrence.

North Island Regional Study Morning, Rotorua 28th November 2009. Submitted by Teena Robinson.

Once again a very successful study morning was held. A round thirty nurses from Tauranga, Rotorua, Hamilton and Auckland attended. The morning was opened by **Mr Van Nieuwenhuizen** Orthopaedic Surgeon who revisited what we know and what is new in the world of VTE prevention detection, treatment. The take away message is that the decision on which and what VTE prophylaxis to use and for how long is a complex decision, influenced by many competing concerns and considerations. The wide variance in practice between orthopaedic surgeons is likely to continue for some time.

Teena Robinson, a prescribing Nurse Practitioner reviewed the pharmacokinetics, actions, benefits, side effects and specific consideration of Aspirin, Warfarin and Clexane. The ranging merits of these agents in VTE prophylaxis were discussed

Georgia Smith from Boehringer Ingelheim introduced Pradaxa (dabigatran etexilate) a reversible direct thrombin inhibitor. She presented the findings of two large randomised double blinded trials comparing Pradaxa to Clexane in knee replacement and hip

replacement patients. The trials showed that Pradaxa was as effective as Clexane with a similar complication profile. The main advantage of Pradaxa being that it is oral tablet and does not require blood monitoring.

Kim Brooks closed the meeting with a photo journal of her time in Cambodia where she worked as a volunteer nurse and nurse educator. Her inspiring stories led to a proposal being tabled that NZONA should support a member to continue the good work that has been started. Check out the web page in early January 2010 for more information.

The education session was followed by a regional NZONA meeting.

Important issues coming up in 2010. Membership input will be required.

Education.

In 2010 the newly formed education committee will be arranging an on-line survey for membership. Our aim is to provide orthopaedic information for the membership to access. This information will be based on Best Practice guidelines. It will not be taking the form of set procedures as each organisation has its own quality control that influence how these are formatted and approved.

The survey will be looking at what topics the membership would appreciate information on. Some ideas that have been suggested include pin site cares, traction and cast care. Specialist nurses may be called upon to contribute to these. Once the guidelines are formatted, the executive will then approve these before they are posted on the web site.

Orthopaedic Nursing support for Cambodia.

It has been proposed that we sponsor an NZONA member to visit a hospital in Cambodia later in 2010 to assist with development of clinical skills, education and other needs. There will be a vote on this issue to be posted on the web site. Feedback and discussion to be collated by February 2010. This will follow on from a visit undertaken by Kim Brooks earlier this year.

Upcoming Events

British Trauma Society. Annual Scientific Meeting.

19th, 20th & 21st May 2010.

The Radisson Edwardian Hotel, Manchester, UK.

Contact alison@tia-medicolegal.com

EFORT

11th European Federation of Orthopaedic and Traumatology Congress, Nurses Session

Madrid, Spain.

2-5 June 2010

Early registration deadline January 31st 2010

www.efort.org/madrid2010/nurse

Canadian Orthopaedic Nurses Association Halifax Mayflower Chapter.

May 16-19 2010.

Halifax Canada. Further information:

www.cona-nurse.org/en/Conference/index_conference.

NAON at 30: Memories and Momentum
Washington State Convention and Trade Center
Seattle, Washington
May 15 - 19, 2010

Further information: www.orthonurse.org

NZONA Northern region workshop.

February-March 2010

Waikato

Details to follow.

The 1st International Collaboration of Orthopaedic Nurses
(ICON)Conference

16th-17th September 2010

Crowne Plaza, Northwood Park

Dublin, Ireland.

www.icon2010.com

SOTON Annual International Conference

18-19th March 2011

York Racecourse,

York, England

orthopaedics@rcn.org.uk

Some useful websites:

www.orthopaedicnursing.org

www.ona.asn

www.orthonurse.org