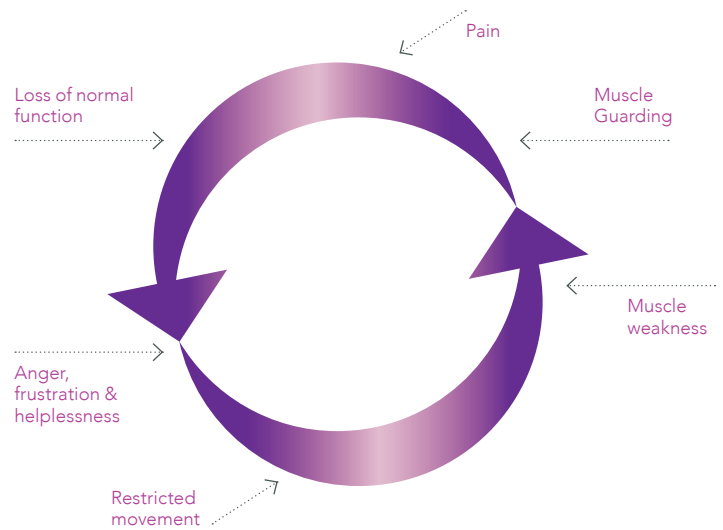


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# PAIN AND MUSCULOSKELETAL ISSUES

Hayley Coulson



85% of people with haemophilia had suffered pain in the last 6 months. 89% reported this interfered with their daily life. 50% indicated this was constant pain.

The World Federation of Hemophilia Congress in Glasgow provided a great opportunity to listen to speakers from across the world. This report will briefly touch on some of the sessions I attended and found most valuable as a physiotherapist.

## Pain

### Plenary - Gaining insight into the complexity of pain in patients with haemophilia

Nathalie Roussel, Belgium

Roussel commenced her presentation with research studies showing that there was a high prevalence of pain in people with haemophilia. 85% of people with haemophilia had suffered pain in the last 6 months. 89% reported this interfered with their daily life. 50% indicated this was constant pain.

Roussel gave a very interesting overview of how pain works and some of the issues for people with haemophilia.

**Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage.**

*International Association for the study of pain*

Abnormal pain physiology results in an overactive ascending pathway to the brain. This leads to critical levels of nerve excitement which can impact on the message to the brain ('action potential') and increase the pain response and decrease pain thresholds.

However, neuroplasticity (changes in the function, structure and biochemistry of the brain) can change the brain/pain cycle. Pain results in increased brain activity. Emotional responses such as stress, depression, worrying, fear of movement and hypervigilance should be considered when managing pain as a patient's behaviour will impact on their recovery. If pain is impacting on an individual's day-to-day activities, appropriate referrals and action needs to be taken to support this person in managing the pain as best as possible.

Education about pain is encouraged, and treating individuals need to be on the same page (psychologist, physiotherapist, doctors and nurses).

It is important to pay attention to the pain mechanisms and establish a proper treatment plan:

Type of pain	Treatment approach
Nociceptive pain, i.e. pain arising from the stimulation of nerve cells (acute vs chronic). In haemophilia prior cause is tissue damage.	Medications?
Neuropathic pain: nerve related pain	Medications?
Neuroplastic pain: pain is arising from the CNS (central nervous system)	Pain is not always a reliable signal. Medication?



Hayley Coulson and Moana Harlen at the Congress,  
Photo: Hayley Coulson

## Progress Of Joint Arthropathy: Cradle To Grave

Chairs: Nicholas Goddard, Angela Forsyth

### Childhood

Manuel Carcao, Canada

This was my favourite presentation of the Congress. Dr Carcao focused on the importance of early presentation and treatment in joint bleeds. He discussed the mission to preserve joints from childhood to improve joint outcomes in adulthood. Children, whether they have haemophilia or not, are born with perfect joints. He discussed three case studies of severe patients with different outcomes:

He highlighted the importance of treating early and remembering that it takes at least one week for the synovium to resorb the blood. Every bleed can potentially damage the synovium, and this holds an even greater risk if treatment is delayed. He ended the presentation with an MRI of a poorly managed ankle bleed which showed blood within the joint 5 weeks after the initial presentation.

Bad Outcome	Not a good Outcome	Good Outcome
18-year-old male.	18-year-old male.	18-year-old male.
Moved from another country where they used "on-demand" therapy. Started prophylaxis late.	Commenced prophylaxis early but had poor adherence.	Commenced prophylaxis early, excellent adherence.
Imaging reveals right elbow and right ankle damage with osteochondral (smooth surface at the end of bones) changes	Imaging reveals right knee, right ankle and left ankle changes with increased fluid and hemosiderin (a protein that stores iron in your body) deposits	Imaging showed no damage.

Overall the Congress for 2018 was informative with lots of new research arising from HTC's around the world.

## Rapid Fire Presentations

Chair: *Mauricio Silva*

### A novel physiotherapy led musculoskeletal clinic – the perceptions of persons with haemophilia

*Vishal Patel, United Kingdom*

Vishal Patel is a physiotherapist in the UK who discussed a positive outcome at his Haemophilia Treatment Centre (HTC) with musculoskeletal-specific clinics. The standard multi-disciplinary clinics with a doctor, nurse, psychologist and physiotherapist run 15-30 minutes and utilise the Haemophilia Joint Health Score (HJHS) and Haemophilia Activities List (HAL) as outcome measures. The musculoskeletal clinics in comparison run for 1-hour periods with the physiotherapists and utilised the HJHS, HAL and ultrasound to focus on musculoskeletal health and function with the goal to screen and prevent chronic arthropathy. As a result 95% of patients found this useful, 95% would like further musculoskeletal appointments and 87% would recommend this to other haemophilia patients.

## Synovitis Re-Visited

Chairs: *Adolfo Llinás, Colombia; Rachel Tiktinsky, Israel*

### The place of ultrasound

*Carlo Martinoli, Italy*

### Classification and difficulties of assessment

*Horacio Caviglia, Argentina*

### Pitfalls

*Sylvia Thomas, Brazil*

Ultrasound is being used more across the world in many HTC's to review joint, synovium and cartilage changes in people with bleeding disorders. For the health care practitioners who use ultrasound in HTC's, this session covered some valuable technical issues relating to diagnosing.

Many discussions throughout the Congress recommended appropriate training in use of ultrasound to ensure effective diagnosis and avoiding the synovitis "mimickers". This session discussed two mimickers in particular:

- **Fat pads:** At some locations, distinguishing synovium from hypoechoic fat might not be straightforward. The synovium is contained in a well-defined pouch in continuity with the joint line. Always remember that bone becomes concave when there is no cartilage, as cartilage is convex in shape.
- **Intra-articular blood:** In a 24 hour period blood shows a homogeneous echogenic pattern. With the ultrasound probe compression the blood shows a swirling motion and it squeezes blood away. In the later stages of a bleed, fresh clots are echogenic but do become hypoechoic with progressive lysis of the red blood cells. The best ways to distinguish blood from synovium is to review the wall thickening as blood does not attach to the walls like synovium. Blood has smooth margins opposed to the irregular margins of the synovium. Blood is also free of colour flow at doppler imaging.

Ultrasound has been utilised as an effective assessment tool that is also inexpensive when compared to other methods of imaging. Ultrasound is recommended in combination with a comprehensive physical examination.

## Conclusion

Overall the Congress for 2018 was informative with lots of new research arising from HTC's around the world. While there are breakthroughs with the utilisation of ultrasound in assessment, in other areas such as general bleed management, musculoskeletal assessment and outcome measures remain the same, with recommendations made for ongoing research into the most effective outcome measures for the bleeding disorder population.

I would like to thank Haemophilia Foundation Australia for the opportunity to attend the Glasgow Congress to not only learn about emerging changes in the management of haemophilia at an international level but also the opportunity to network with the bleeding disorders community. 📧

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