Assessment of the reliability and reproducibility of the Waldenström and Elizabethtown classification system for Perthes disease: Does the addition of sub-classes make the Elizabethtown classification less reliable?

PRESENTING AUTHOR: DR. ANKITA BANSAL

CO-AUTHORS: Dr. Mandar Agashe, Dr. Sandeep Vaidya, Dr. Mudit Shah, Dr. Avi Shah, Dr. Deepika Pinto

Agashe’s Paediatric SuperSpeciality clinic, Mumbai
Introduction & Aim

• To assess the reliability, reproducibility, and the effect of surgeon’s experience in using the Waldenström and Elizabethtown classification.

Materials & Methods

• 6 paediatric orthopaedic surgeons (3 with more than 8 years experience, 3 with less)
• 50 hip radiographs (AP & frog leg lateral)
• Review on 2 separate occasions
• Blinded to age and gender of patient
Results

- There was substantial agreement for both Waldenström (72%) and Elizabethtown classification (71%) within the observers (intra-observer reliability).

- Better inter-observer reliability for Elizabethtown classification as compared to Waldenström.

- No significant effect of experience on the reliability of the classifications.

- Highest repeatability of stage 4 in Waldenström as well as Elizabethtown classification.
Literature review

• Hyman et al (2015) demonstrated substantial to almost perfect agreement between and within observers for the modified Waldenström classification.


Conclusion

• Elizabethtown classification is equally reliable as compared to Waldenström classification

• It has a short learning curve and can be used equally well by junior as well as senior clinicians