Synchronous contralateral asymptomatic inguinal hernia in children presented with unilateral inguinal hernia: a comparison between preoperative ultrasound and operative findings

Background

Is to evaluate the sensitivity and specificity of pre-operative inguinal ultrasonography in detection of CPPV after comparing its results with that found during surgical exploration, and to assess if this policy will be helpful in decreasing the incidence of metachronous inguinal hernia development.

Patients and methods

A prospective study of children presented clinically with unilateral inguinal hernia, Pre-operative US was performed to all of them to assess the contralateral groin; if the contralateral groin proved to have patent processus vaginalis (PPV) by US, bilateral groin exploration was done. Surgical findings were reported in two categories: Normal groin (no contralateral sac found) or Positive finding (if contralateral hernia sac found), the surgical finding was compared to the US finding. If the contralateral groin has no PPV by US those patients were strictly followed up for at least 18 months to detect the possible development of metachronous inguinal hernia. False positive and false negative cases were recorded and compared to true positive and negative cases and statistically analyzed, US sensitivity and specificity were calculated.

Results

137 children diagnosed clinically with unilateral inguinal hernia were included in this study, Ultrasonography detected the presence of contralateral patent processus vaginalis (CPPV) in 52 patients (38%), while 85 patients have no CPPV (62%), After surgical exploration of the clinically negative 52 groin, hernia sac were found in 50 of them (96.2%) , false positive US finding was about 3.8%.The incidence of CPPV was much more common in patients diagnosed with left sided unilateral hernia (54.5%), No contralateral groin exploration was performed in 85 patients, those patients were strictly followed up for the development of

metacronous inguinal hernia(MCIH) , only one of them developed MCIH 6 months post-operatively, the incidence of developing a MCIH after negative US finding was 1.17 %.The US proved to have 98% sensitivity and 97.7% specificity in diagnosing the CPPV after comparing its results with that found during surgical exploration.

Conclusion

pre-operative inguinal US detect the presence of CPPV correctly in almost all cases, contralateral surgical exploration of those patient significantly decreased the incidence of MCIH in our follow up period.
Keywords:

asymptomatic, hernia, inguinal, MCIH, synchronous