A SYSTEMATIC REVIEW AND META-ANALYSIS OF THE EVIDENCE FOR ASSOCIATION OF POTENTIAL RISK FACTORS WITH DEFORMATIONAL PLAGIOCEPHALY

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Background A number of potential risk factors may change the odds for developing deformational plagiocephaly. Understanding the evidence for the association of potential risk factors will improve the diagnosis and management of deformational plagiocephaly.

Objectives The aim of this study was to conduct a systematic review and meta-analysis to assess the evidence for association between potential risk factors and deformational plagiocephaly.

Methods The study was conducted in accordance with PRISMA guidelines (PROSPERO identifier: CRD42020204979). PubMed and Web of Science were searched (21 August 2010 through to 21 August 2020) for observational studies which assessed risk factors for deformational plagiocephaly. Main outcomes were any risk factors which alter odds for the development of deformational plagiocephaly. When feasible, pooled meta-analytic estimates were provided using fixed- or random-effects models.

Results A total of 17 studies met the inclusion criteria. Meta-analysis demonstrated evidence of association between specific risk factors and deformational plagiocephaly, including male gender (OR, 1.66; 95% confidence interval (CI) 1.13 to 2.43; I², 63.25%; N=4), supine sleeping position (OR, 3.23; 95% CI 2.05 to 5.10; I², 17.26%; N=2), head position preference (OR, 4.76; 95% CI 3.44 to 6.57; I², 0.00%; N=3), vaginal mode of delivery (OR, 1.55; 95% CI 1.07 to 2.23; I², 0.00%; N=3), and low maternal education level (OR, 1.66; 95% CI 1.17 to 2.37; I², 0.00%; N=2). Evidence of no association was found for small for gestational age (SGA; OR, 1.74; 95% CI 0.91 to 3.31; I², 37.08%; N=2), multiple pregnancy (OR, 1.97; 95% CI 0.30 to 13.15; I², 87.04%; N=2), and cephalic presentation at delivery (OR, 0.53; 95% CI 0.10 to 2.86; I², 88.61%; N=2).

Conclusions Risk factors associated with the development of deformational plagiocephaly include male gender, sleeping supine, head position preference, vaginal delivery, and lower maternal education. Risk factors with evidence of no association include SGA, multiple pregnancy, and cephalic presentation. These findings may assist in the development of guidelines for improving the diagnosis and management of deformational plagiocephaly.
positive association, using quintiles for fT3, was reported for Motor Development Index (MDI; a subtest of the Bayley’s Scales of Infant Development), between Q3 vs Q4 (β 0.073; p 0.043) and for Q3 vs Q5 (β value 0.086; p 0.018).

Conclusions Thus, it is possible mothers in our cohort, who largely have optimal thyroid function and iodine intakes, are able to regulate thyroid function throughout pregnancy to meet neurodevelopmental needs. However, it is likely that minor imbalances of fT3, as indicated from our quintile analysis, may impact offspring neurodevelopment. Thus, further investigation is warranted, particularly focusing on thyroid hormone fluctuation throughout pregnancy in relation to possible associations with infant neurodevelopment.

British Society of Paediatric Gastroenterology, Hepatology and Nutrition

RESOLUTION TIME OF LIVER ABSCESSES IN CHILDREN: DO WE HAVE AN ANSWER?

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Background The residual abscess on ultrasound after clinical resolution in children creates psychological fear among parents and diagnostic dilemma among physicians. Unlike in adults, there are no studies on resolution time of liver abscess in children.

Objectives To determine the time taken for clinical and ultrasonological resolution of abscess, and estimate the frequency of unfavourable outcomes and assess the clinico-biochemical parameters that influence the occurrence of unfavourable outcomes in children.

Methods A descriptive longitudinal study was conducted in the department of Pediatrics in a tertiary care hospital in North India in which 60 children (aged 1–18 years) with clinical features of fever and pain abdomen with a liver abscess on ultrasound were followed up clinically and by serial ultrasounds till complete ultrasonological resolution. These children with liver abscess on ultrasound were admitted and treated with intravenous antibiotics after appropriate blood tests. Percutaneous needle aspiration and/or surgical drainage (pigtail insertion/laparotomy) was attempted in children not responding to the initial conservative management or those showing signs of impending rupture on ultrasound.

Results The mean ± S.D ultrasonological resolution time was 7.9 ± 3.53 weeks whereas the clinical resolution time was 10.64 ± 4.77 days. Initial conservative management failed in 21 (37.5%) children, 2 (3.6%) children were readmitted and 18 (32.4%) children had complications. There were no deaths in our study. TLC and abscess size were the two clinico-biochemical parameters associated with the occurrence of unfavourable outcomes (p<0.05).

Conclusion Clinical resolution of liver abscess in children takes an average of 10 days, whereas it takes about 8 weeks for ultrasonographic changes to resolve completely.

Quality Improvement and Patient Safety

NO MISTAKES! ONLY LESSONS

Nilima Singh. Mid and South Essex NHS Foundation Trust

Background Departmental Datix outcomes are not regularly shared with front line staff. They miss vital learning from errors and the opportunity to be involved in improvement. Patients suffer recurrent harm.

Objectives By the end of February 2020, 100% of front line staff will be aware of the Datix Outcomes that occurred in the previous month in the Department.

Methods

- Change ideas:
  - Regular emails (1–2/month)
  - Rotation of leadership
  - Ad hoc emails from Pharmacy
  - Microteach, handovers, teaching programmes
  - Set up equipment, format, etc.
  - Visual aid e.g. poster
  - Senior trainees to join in PDSAs:
    1) P
    - Meet Clinical Governance Lead in consultant office.
    2) D
    - Share Problem statement, initial data, fish bone, aim and change ideas
    - Lead readily recognised the issue and engaged fully.

Agreed change ideas email and a poster

- Lead discussed my project in the next clinical governance meeting and delegated the task of sharing information to Matron for more regularity.

1) P
- Follow up with Matron in her office
  - What happened?
  2) D
  - Confirmed sent most recent Datix outcomes to Governance umbrella tea
  - Email still didn’t reach front line staff email box.

Agreed main 1 or 2 learning outcomes to go in a poster

- Matron to find out reasons why. Agreed to rotate task of sharing information between leads. No change in Datix outcome awareness.

3) P
- Meeting with Clinical Governance Lead again

D
- Email formatted in the sitting. Poster reviewed and sent.

12 staff interviewed in week 1.

S
- 0% saw poster- not signposted in email.

8/12 (66%) aware of Datix outcome. 4/12 unaware (2 newly joined GPVTS + 2 oncology)