Aims To compare gastrointestinal pathology, mortality and surgical ligation of PDA in infants treated for PDA with Ibuprofen and Indomethacin.

Background PDA affects 60% of infants <28 weeks gestation. Treatment options include conservative management, pharmacological intervention and surgery.

NSAIDs are effective pharmacological agents used to treat PDA. They inhibit prostaglandin synthesis via non-selective inhibition COX-1 and COX-2. COX-1 inhibition reduces cerebral, mesenteric and renal blood flow and alters platelet function. Ibuprofen has less COX1 inhibition, therefore may have reduced side effect profile. In our unit PDA treatment changed in 2010 from Indomethacin to Ibuprofen because of unavailability of Indomethacin.

Methods Demographics and outcomes from babies <31 weeks gestation and admitted (<6 days of age) between January 2008 and June 2012 were collected from a local database and Vermont Oxford Network dataset. NEC, spontaneous intestinal perforation (SIP), PDA ligation and mortality were compared in two epochs, indomethacin and Ibuprofen.

Results

	Indomethacin (n = 96)	Ibuprofen (n = 100)	Student t test/ Chi squared test
Gestation (mean ± SD)	25.5 ± 1.7 wks	25.8 ± 1.9 weeks	P = 0.18
Birth weight (mean ± SD)	773 ± 226g	839 ± 227g	P = <0.05
All NEC	17 (17%)	8 (8%)	P = 0.06
Early NEC(<28 days)	12	4	P = 0.035
Late NEC(>28days)	5	4	P = 0.73
SIP	4 (4%)	4 (4%)	P = >0.99
Died from gut pathology	7 (35%)	3 (25%)	P = 0.70
PDA ligation	22 (23%)	22 (22%)	P = 0.98
Died post ligation	0	0	
Gut pathology post ligation	2 NEC	1 intussusception	
Mortality	13 (14%)	10 (10%)	P = 0.58

Conclusion There was a significant reduction in early NEC during the Ibuprofen epoch compared to Indomethacin epoch. These results are similar to the reduction of NEC with Ibuprofen compared to Indomethacin (RR 0.68 (95% CI 0.47 to 0.99)) reported in a recent meta-analysis (Cochrane Database Syst Rev. 2013 Apr 30; 4:CD003481). As with all cohort studies there are confounding factors including demographics factors and potential alterations in clinical practice including feeding practices between the two epochs.

Young Person's Health Special Interest Group

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A SYSTEMATIC REVIEW OF MENTAL HEALTH OUTCOMES IN YOUNG PEOPLE FOLLOWING SEXUAL ASSAULT

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Aims Sexual assault peaks in mid-to late adolescence but its sequelae among this age group are not well understood. This systematic review aimed to describe mental health outcomes in young people following sexual assault.

Methods Two reviewers searched Medline, Embase, CINAHL, OpenGrey and PsycINFO databases independently, screening publications from 1990 to 30th October 2013.

Inclusion criteria: longitudinal studies, systematic reviews and meta-analyses in English with ≥50% participants aged 10–24 years; baseline mental health assessment conducted prior to or <8 weeks post-assault with follow-up ≥3 months later, and within three years of index assault. Study selection, data extraction and quality assessment were performed independently, with any differences resolved by a third person. Quality assessment used the Newcastle-Ottawa Scale.

Results 3,758 titles and abstracts were screened after excluding duplicates, with 494 papers examined in full. Five cohort studies met inclusion criteria (sample size 64–294; mean age 13–26 years; duration of follow-up 3–12 months post-assault).

Three studies examined rates of Post-Traumatic Stress Disorder (PTSD), reporting rates of 88%–94% within a month of assault, 47%–71% by 3 months and 10.5%–65% by 12 months post-assault. Only one study measured rates of Depressive Disorder, reporting rates of 35% 6 months post-assault. A study assessing anxiety disorders 6 months post-assault found that 11% had Generalised Anxiety, 16%, Panic Disorder, 44%, Social Phobia, 41%, Specific Phobia and 56%, Agoraphobia.

Longitudinal studies evaluating post-traumatic (n = 3), depressive (n = 2) or anxiety symptom scores (n = 1) all reported reduced symptoms over 6–12 months post-assault.

Limitations Small sample sizes, and heterogeneity of study populations, measures used and follow-up schedules.

Conclusion Psychopathology is common following sexual assault in young people. Most studies reviewed observed reduced rates of mental health disorders and reduced symptom scores over time but there is a paucity of longitudinal research in this area. Large scale, good quality studies are needed to characterise the nature and course of mental health difficulties experienced by adolescent sexual assault victims over time, in order to allow for better targeting of resources for these individuals.

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EXPERIENCES AND PERSPECTIVES OF ADOLESCENTS PRESENTING TO SEXUAL ASSAULT REFERRAL CENTRES

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Background Adolescent sexual assault victims are a vulnerable group with a high baseline prevalence of mental health problems and low follow-up rates. Little is known about their experience of services following sexual assault.

Aims To evaluate experiences of care among adolescents accessing co-ordinated specialist sexual assault services serving a large UK city.

Methods *Design:* Prospective longitudinal cohort study.

Study population: Adolescents aged 13–17 years presenting to a sexual assault referral centre (SARC) within six weeks of assault. Participants evaluated care received from different professionals using a questionnaire adapted from the Commission

Abstract G147 Figure 1 Adolescent experiences of care following sexual assault

for Health Improvement Experience of Service Questionnaire (CHI-ESQ).

Results 30% consented to take part. Data were analysed for the first 64 study participants, evaluating care received from uniformed police ($n = 51$), specialist sexual offences investigative techniques (SOIT) officers ($n = 58$) and clinical staff at the SARCs (doctors and crisis workers, $n = 64$). 97% were police referrals and 3%, self-referrals. 67% had experienced vaginal rape, 32%, oral rape and 12%, anal rape. 90% underwent a forensic medical examination.

Commonly held fears before accessing care were that they would be judged, disbelieved, 'blamed' or 'called a liar'. Many participants were apprehensive that the forensic examination would be painful, embarrassing or reveal health problems such as infections.

As shown in Figure 1, care given by clinical staff at SARCs was consistently rated higher than police care. Only 49% found uniformed police easy to talk to and only 64% felt safe in their care. Only 63% felt believed by their SOIT officer and only 59% felt they had been given enough information (Figure 1).

Conclusions Many participants described positive experiences of systems of care for victims of sexual assault. However, variable experiences of care between services highlight the need for improvement in specific areas. Anxieties about being blamed or judged may prevent adolescents accessing services following sexual assault.

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THE RELATIONSHIP BETWEEN PUBERTAL STATUS AND NEURAL ACTIVITY DURING RISKY DECISION-MAKING IN MALE ADOLESCENTS USING FMRI

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During adolescence, risk-taking emerges as an important behaviour. One prominent theory proposes that this increased risk-taking results from a dissociation in the maturational timing of the brain regions involved in reward processing and cognitive control. It is hypothesised that the regions involved in reward processing, particularly the limbic system, mature relatively early in adolescence, in tandem with pubertal maturation. In contrast,

the cognitive control regions of the brain, found principally within the prefrontal cortex, are proposed to undergo protracted development throughout adolescence. The goal of this functional Magnetic Resonance Imaging (fMRI) study was to explore how developmental changes in brain function when performing a risk-taking task were related to puberty, independently of chronological age.

Fifty male participants aged 12–14 years underwent fMRI scanning whilst performing a risk-taking task (the BART task). Indicators of pubertal development were collected, including self-reported pubertal status using Tanner stage diagrams and salivary hormone levels for testosterone, oestradiol and dehydroepiandrosterone (DHEA). Participants were grouped by pubertal status into early-mid puberty ($\leq$ Tanner Stage 3 in pubic hair and gonadal development; $n = 23$) and late-post puberty ($\geq$ Tanner Stage 4 in either pubic hair or gonadal development; $n = 26$).

General linear modelling was used to investigate whether there were differences in neural activity within the reward processing and cognitive control brain networks during the risk-taking task with pubertal development, as measured by Tanner stage puberty groups and hormonal levels. Oestradiol levels were positively correlated with neural activity in the medial prefrontal cortex and orbitofrontal cortex when deciding not to make a risky choice. Testosterone levels and puberty grouping (early-mid vs. late-post) were correlated with prefrontal cortex activation during the processing of outcomes of a risky decision.

This study highlights the complexity of the decision-making process, and the extensive network of brain regions involved. It suggests that various aspects of the process of deciding to make a risky decision are related to distinct elements of pubertal development.

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THE MANAGEMENT OF EATING DISORDERS ON CHILDREN'S WARDS: TRIALS, TRIBULATIONS AND TRAINING

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Aims This series of studies considers the challenges faced when caring for young people with eating disorders on children's wards, suggesting approaches to improving quality of care.