

Laxative prescribing during pregnancy in primary care

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Introduction Constipation is frequently reported during pregnancy.¹ A number of factors probably contribute to this including mechanical pressure of the uterus on the colon, altered levels of oestriol,² progesterone³ and motilin⁴ and concurrent medication.⁵ The use of laxatives may give some indication of when constipation becomes troublesome but prescribing rates during pregnancy are unknown. This study, therefore, was set up to determine the frequency of laxative prescribing during pregnancy and the impact of concurrent medication.

Method Women with the five-digit Read code for pregnancy in the Welsh general practice morbidity database were identified during the period September 1993 to December 1997. The month in which the Read code appeared was month zero. All medicines prescribed in the following eight months and the preceding nine months were recorded.

Prescribing data in the 28 days before the Read code appeared were excluded to minimise contamination of before pregnant data. Subjects were excluded if they did not have complete prescribing records for the 17-month study period, if the Read codes for abortion or miscarriage appeared in the records, or if an oral contraceptive was prescribed during the eight months after the pregnancy was first recorded.

Pregnant women were matched to non-pregnant female controls of the same age registered with the same general medical practice. Prescribing data was collected over the same eight-month period as pregnant cases.

Data were analysed in SPSS (version 10.0). Prescribed medications were grouped according to their British National Formulary (BNF) classification and prescribing rates expressed as items/1,000 individuals/month (95 per cent confidence interval). Prescribing rates before and during pregnancy were compared using the Wilcoxon matched pairs signed rank test. The Mann-Whitney U-test was used to compare prescribing rates before pregnancy with that in matched controls. Forward logistic regression was used to explore the relationship between laxative pre-

FOCAL POINTS

- Hormonal changes, mechanical pressure and concurrent medication all contribute to altered bowel habit during pregnancy
- It has been suggested that pregnant women are more likely to receive laxatives than the baseline population
- A retrospective case control study using a primary care prescribing database was undertaken to compare laxative prescribing before and during pregnancy with that in matched controls
- Prescribing rate of laxatives increased during pregnancy compared with before becoming pregnant but this was not different to controls
- Pregnant women were more likely to receive a laxative if they were using antibacterials, preparations for haemorrhoids or drugs for nausea and vertigo

scribing in pregnancy and concurrent medication. Results are presented as odds ratios (OR) with 95 per cent confidence intervals.

Results Prescribing records of 503,729 patients were reviewed and 1,030 pregnant cases identified. Of these cases 328 women, mean age 27.5 (range 17-49) years, satisfied inclusion criteria.

Cases received 518 (469, 566) items before they became pregnant and 628 (566, 690) items/1,000 individuals/month (P=0.108) during pregnancy. In comparison, controls received 917 (818, 1016) items. However, more gastrointestinal drug items (P<0.001) were prescribed during pregnancy (112 [90,135]) than before pregnancy (26 [18, 35]) or in controls (48 [30, 66]). While there were more (P=0.042) laxatives prescribed during pregnancy (15 [9, 21]) than before (7 [2, 11]) it was no different (P=0.360) to that seen in controls (7 [6, 14]).

Multivariate analysis showed that pregnant women were more likely to be prescribed laxatives if they were using antibacterial drugs (P=0.016; OR=2.6 [1.2, 5.7]), preparations for haemorrhoids (P=0.019; OR=4.4 [1.7, 11.2]) or drugs for nausea and vertigo (P=0.013; OR=11.2 [1.7, 75.1]).

Discussion The results demonstrate that pregnant women were prescribed more laxative items during pregnancy than before they became pregnant. A similar trend was seen

when pregnant cases were compared with controls but this was not statistically significant. This particular result was unexpected and is counter to conventional wisdom. However, no previous study has quantified prescribing rates of laxatives during pregnancy.

Also unexpected was the association between laxative use and the prescribing of antibacterial drugs. Both these issues will be studied further.

References

1. Lewis JH, Weingold AB. The use of gastrointestinal drugs during pregnancy and lactation. *Am J Gastroenterol* 1985;80:912-23.
2. Hudson CN, Bowcock S. Constipation during and after pregnancy. In: Kamm MA, Lennard-Jones JE (editors). Hampshire: Wrightson Biomedical Publishing Ltd; 1994. p369-73.
3. Wald A, van Thiel DH, Hoehstetter L, Gavalier JS, Egler KM, Verm R, Scott L, Lester R. Effect of pregnancy on gastrointestinal transit. *Dig Dis Sci* 1982;27:1015-8.
4. Christofides ND, Ghatei MA, Bloom SR, Borberg C, Gillmer MDG. Decreased plasma motilin concentrations in pregnancy. *BMJ* 1982;285:1453-4.
5. Tally NJ, Fleming KC, Evans JM, O'Keefe, Weaver AL, Zinsmeister AR, Melton LJ. Constipation in an elderly population: a study of prevalence and potential risk factors. *Am J Gastroenterol* 1996;91:19-25.

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Int J Pharm Pract
2001;9(suppl):R29