

## References

- Ponté C, Remy J, Lacombe A, Bonté C, Lequien P. [Calcified thrombus of the inferior vena cava with renal calcifications in a newborn.] *Ann Pediatr (Paris)* 1972; 19: 297–300.
- Ramanathan T, Hughes TM, Richardson AJ. Perinatal inferior vena cava thrombosis and absence of the infrarenal inferior vena cava. *J Vasc Surg* 2001; 33: 1097–1099.
- Ranch D, Aigbe MO, Gorospe EC. Prenatal calcification of the inferior vena cava and renal veins in a normal neonate. *ScientificWorldJournal* 2006; 6: 734–736.
- Rudolph N, Levin EJ. Hydrops fetalis with vena caval thrombosis in utero. *N Y State J Med* 1977; 77: 421–423.
- Rypens F, Avni F, Braude P, Matos C, Rodesch F, Pardou A, Struyven J. Calcified inferior vena cava thrombus in a fetus: perinatal imaging. *J Ultrasound Med* 1993; 12: 55–58.
- Smorgick N, Herman A, Wiener Y, Halperin R, Sherman D. Prenatal thrombosis of the inferior vena cava and the renal veins. *Prenat Diagn* 2007; 27: 603–607.
- Sodhi KS, Khandelwal S, Ray M, Suri S. Calcified neonatal renal vein and vena caval thrombosis. *Pediatr Radiol* 2006; 36: 437–439.
- Wheeler DS, Poss WB, Stocks AL. Radiological case of the month. Inferior vena cava and renal vein thrombosis in a neonate. *Arch Pediatr Adolesc Med* 2001; 155: 415–416.
- Weissmann-Brenner A, Ferber A, O'Reilly-Green C, Avila C, Grassi A, Divon MY. Inferior vena cava thrombosis presenting as non-immune hydrops in the fetus of a woman with diabetes. *Ultrasound Obstet Gynecol* 2004; 23: 194–197.
- Linthoudt H, Stockx L, Verhaeghe R, Vermyn J. Les anomalies congénitales de la veine cave inférieure prédisposent-elles à la thrombose? *Sang Thrombose Vaisseaux* 1996; 8: 551–556.

### Removal of focal intracavitary lesions results in cessation of abnormal uterine bleeding in the vast majority of women

Endometrial polyps have mainly been reported in women with abnormal uterine bleeding. Recent studies, however, have demonstrated a high prevalence in asymptomatic women, especially after the menopause<sup>1–3</sup>. Dreisler *et al.* showed that polyps were more prevalent in asymptomatic premenopausal and postmenopausal women than in those with abnormal bleeding<sup>4</sup>. They challenged the generally accepted hypothesis that endometrial polyps cause abnormal bleeding.

We looked at the evolution of bleeding symptoms in 124 women referred for operative hysteroscopy because of focal intracavitary lesions diagnosed at ultrasound imaging with hydrosoneography and/or office hysteroscopy at the 'one-stop bleeding clinic' of the University Hospital Leuven, Belgium, from November 2004 to March 2007<sup>5</sup>. Twelve patients did not undergo operative hysteroscopy: four had not returned for operative hysteroscopy, one patient had undergone a hysterectomy and one a myomectomy by laparotomy, one woman died, one developed ovarian cancer, one had breast cancer with metastasis in the uterus and three patients were lost to follow-up. The remaining 112 women were contacted by telephone or mail between September and October 2007, and interviewed about the evolution of their bleeding pattern since

the operative hysteroscopy. Follow-up between the operative hysteroscopy and the questionnaire ranged from 7 to 34 (median, 21.3) months. In 27 cases (24.1%) additional treatment had been given after the operative hysteroscopy for contraception or bleeding control; this included medical treatment in 11.6%, a levonorgestrel intrauterine device in 9.8% and three women (2.7%) had since had a hysterectomy. These 27 patients were excluded from further analysis.

The mean  $\pm$  SD age of the remaining 85 women at treatment was  $53.6 \pm 10.7$  (range, 29–79) years and 50.6% ( $n = 43$ ) were postmenopausal. The mean  $\pm$  SD endometrial thickness at initial ultrasound examination was  $11.0 \pm 6.4$  (range, 2.1–29.5) mm. Overall, 98.8% ( $n = 84$ ) of women reported an improvement in their bleeding pattern (Table 1), 97% ( $n = 32$ ) of the premenopausal women vs. 100% ( $n = 43$ ) of the postmenopausal women ( $P = 0.43$ ). For those in whom endometrial polyps had been confirmed at histology, 93% ( $n = 14$ ) of the premenopausal patients and 100% ( $n = 38$ ) of postmenopausal women declared the bleeding pattern improved after surgery (Table 2). There was a significant association between symptom relief and duration of follow-up (mean  $\pm$  SD follow-up time  $20.8 \pm 6.6$  months and  $28.2 \pm 5.7$  months in the case of definitive and transient improvement respectively,  $P = 0.01$ ), but not with endometrial thickness ( $P = 0.61$ ), age ( $P = 0.32$ ) or parity ( $P = 0.68$ ). The fact that five polyps could not be confirmed at histology after operative hysteroscopy (Table 2) does not necessarily mean that those cases were false-positive diagnoses on ultrasound imaging or office hysteroscopy. In a previous series polyps could not be confirmed at histology in up to 38%<sup>6</sup>. This rather illustrates the lack of an infallible 'gold standard' in the evaluation of diagnostic accuracy for endometrial disease.

Although this is not a randomized controlled study, the present data support the hypothesis that hysteroscopic removal of focal intracavitary lesions is indicated in women with abnormal uterine bleeding; the bleeding symptoms improve or disappear in most cases, and the lesion can be sent for histological examination to exclude malignancy<sup>7,8</sup>. Our study shows that abnormal uterine bleeding tends to recur with time. Henriquez *et al.* reported that recurrence is especially common in premenopausal women<sup>9</sup>. Because we evaluated only symptomatic cases, our data do not allow any conclusions about the management of endometrial polyps diagnosed incidentally at ultrasound examination in women without abnormal uterine bleeding.

Table 1 Symptom relief with respect to menopausal status

Menopausal status	Symptom relief (n (%))			Total (n)
	Definitive	Transient	None	
Premenopausal	30 (90.9)	2 (6.1)	1 (3.0)	33
Perimenopausal	8 (88.9)	1 (11.1)	0 (0)	9
Postmenopausal	38 (88.4)	5 (11.6)	0 (0)	43
Total	76 (89.4)	8 (9.4)	1 (1.2)	85

**Table 2** Symptom relief with respect to histology at operative hysteroscopy

Histology	Symptom relief (n (%))			Total (n)
	Definitive	Transient	None	
<b>Premenopausal women</b>				
Proliferative/secretory changes	3 (100)	0 (0)	0 (0)	3†
Endometrial hyperplasia	1 (100)	0 (0)	0 (0)	1
Endometrial polyp	12 (80.0)	2 (13.3)	1 (6.7)	15
Submucous myoma	11 (100)	0 (0)	0 (0)	11
Retained trophoblastic tissue	1 (100)	0 (0)	0 (0)	1
Other*	2 (100)	0 (0)	0 (0)	2
Total	30 (90.9)	2 (6.1)	1 (3.0)	33
<b>Postmenopausal women</b>				
Proliferative/secretory changes	2 (100)	0 (0)	0 (0)	2†
Endometrial hyperplasia	0 (0)	0 (0)	0 (0)	0
Endometrial polyp	33 (86.8)	5 (13.2)	0 (0)	38
Submucous myoma	3 (100)	0 (0)	0 (0)	3
Total	38 (88.4)	5 (11.6)	0 (0)	43

\*Insufficient tissue in one and transection of adhesions only with no histology available in one. †In five cases the focal lesion could not be confirmed at operative hysteroscopy: in two cases a small polyp had been reported both at ultrasound imaging and diagnostic hysteroscopy, in two cases a small polyp had been reported only on ultrasound examination (in one hysteroscopy had not been performed and in the other an intracavitary clot as well as an endocervical polyp had been reported at hysteroscopy) and in one case a small polyp had been reported at hysteroscopy.

We acknowledge that only a randomized controlled trial comparing hysteroscopic removal with expectant management could prove the efficacy of the removal of focal intracavitary lesions in women with abnormal bleeding.

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## References

- Goldstein SR, Monteagudo A, Popiolek D, Mayberry P, Timor-Tritsch I. Evaluation of endometrial polyps. *Am J Obstet Gynecol* 2002; **186**: 669–674.
- Hassa H, Tekin B, Senses T, Kaya M, Karatas A. Are the site, diameter, and number of endometrial polyps related with symptomatology? *Am J Obstet Gynecol* 2006; **194**: 718–721.
- Van den Bosch T, Van Schoubroeck D, Ameye L, De Brabant J, Van Huffel S, Timmerman D. Ultrasound assessment of endometrial thickness and endometrial polyps in women on hormonal replacement therapy. *Am J Obstet Gynecol* 2003; **188**: 1249–1253.
- Dreisler E, Stampe Sorensen S, Ibsen PH, Lose G. Prevalence of endometrial polyps and abnormal uterine bleeding in a Danish population aged 20–74 years. *Ultrasound Obstet Gynecol* 2009; **33**: 102–108.
- Van den Bosch T, Verguts J, Daemen A, Gevaert O, Domali E, Claerhout F, Vandembroucke V, De Moor B, Deprest J, Timmerman D. Pain experienced during transvaginal ultrasound, saline contrast sonohysterography, hysteroscopy and office sampling: a comparative study. *Ultrasound Obstet Gynecol* 2008; **31**: 346–351.
- Duffy S, Jackson TL, Lansdown M, Philips K, Wells M, Pollard S, Clack G, Cuzick J, Coibion M, Bianco AR. The ATAC adjuvant breast cancer trial in postmenopausal women: baseline endometrial subprotocol data. *BJOG* 2003; **110**: 1099–1109.
- Clark TJ, Khan KS, Gupta JK. Current practice for the treatment of benign intrauterine polyps: a national questionnaire survey of consultant gynaecologists in UK. *Eur J Obstet Gynecol Reprod Biol* 2002; **103**: 65–67.
- Savelli L, De Iaco P, Santini D, Rosati F, Ghi T, Pignotti E, Bovicelli L. Histopathologic features and risk factors for benignity, hyperplasia, and cancer in endometrial polyps. *Am J Obstet Gynecol* 2003; **188**: 927–931.
- Henriquez DD, van Dongen H, Wolterbeek R, Jansen FW. Polypectomy in premenopausal women with abnormal uterine bleeding: effectiveness of hysteroscopic removal. *J Minim Invasive Gynecol* 2007; **14**: 59–63.