

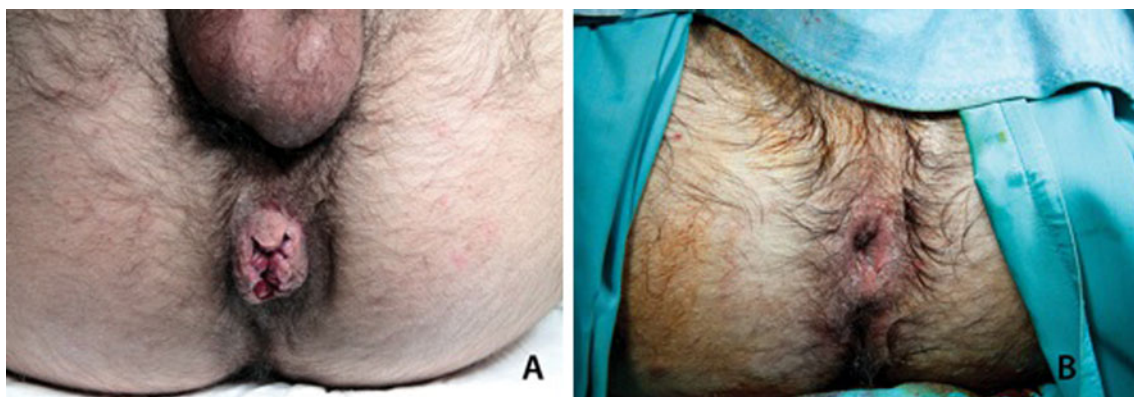
## Colour Doppler-guided haemorrhoidal artery ligation: an adjunct in identification of haemorrhoidal vessels

A. Sammartano · V. D. Palumbo · G. Damiano ·  
G. Spinelli · A. Allegra · G. Tomasello ·  
A. I. Lo Monte

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The colour Doppler-ultrasonographic guided transanal haemorrhoidal dearterialization is a technique that may improve the visualisation of haemorrhoidal arteries to be ligated (Figs. 1, 2). Colour Doppler adds a medium to



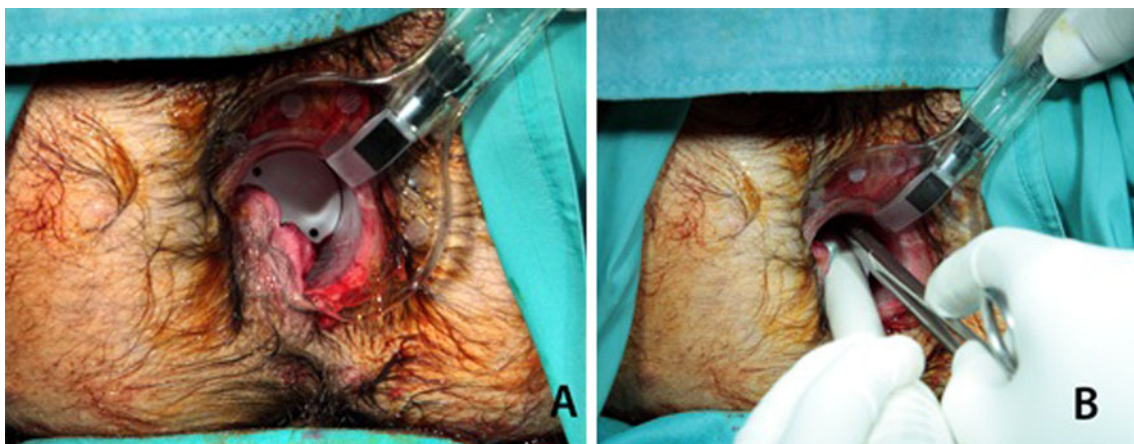
**Fig. 1** Fourth grade haemorrhoids before (a) and after (b) the procedure

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A. Sammartano · A. I. Lo Monte (✉)  
Dipartimento Materno-Infantile e di Andrologia e Urologia,  
Università degli Studi di Palermo, Via Del Vespro 129, 90127  
Palermo, Italy  
e-mail: attilioignazio.lomonte@unipa.it

V. D. Palumbo · G. Damiano · G. Spinelli · G. Tomasello  
Dipartimento di Discipline chirurgiche ed Oncologiche, Facoltà  
di Medicina e Chirurgia, Università degli Studi di Palermo, Via  
Del Vespro 129, 90127 Palermo, Italy

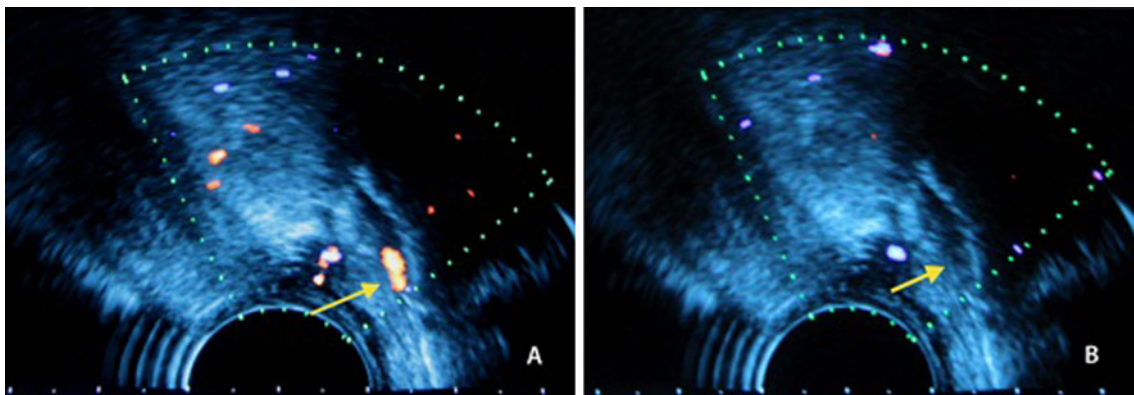
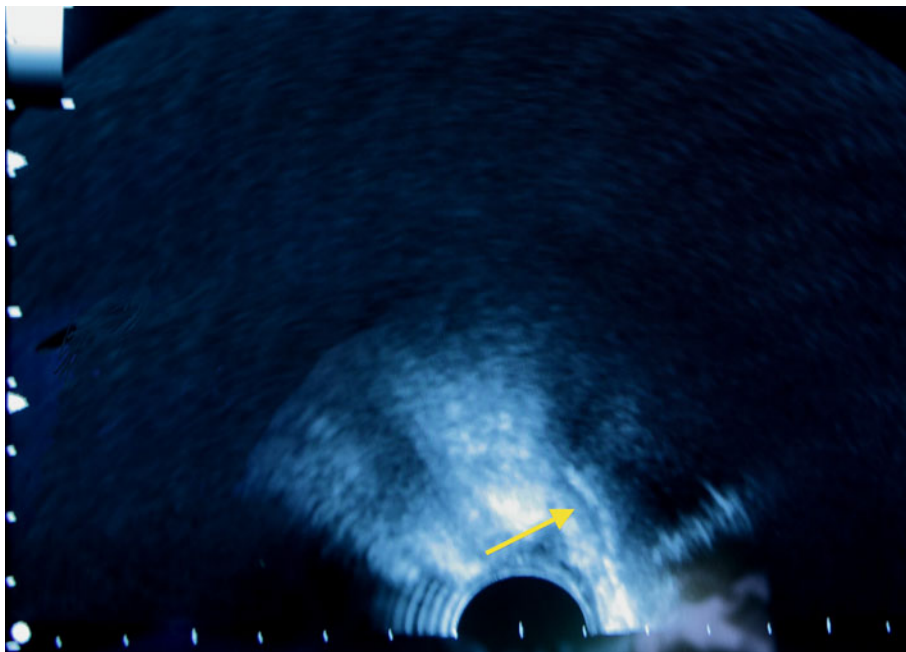
A. Allegra  
Centro Andros, Via Ausonia 43, 90144 Palermo, Italy



**Fig. 2** The beak is introduced into the anal canal (a) and the haemorrhoidal arteries, identified by means of an echocolour-Doppler probe, are suture ligated *under vision*. A figure-of-eight 2/0 Vicryl®

suture is placed around the vessel through the window of the proctoscope and ligated (b)

**Fig. 3** Endoanal ultrasound. The 5/8-circle and 27-mm tapercut needle (yellow arrow) are inserted into the wall of the anal canal and are identified at echotomography



**Fig. 4** Colour-Doppler ultrasound. By means of a 7.5 MHz colour-Doppler endoanal probe, the arteries are consecutively identified (see yellow arrow) (a) and ligated (yellow arrow) (b). As displayed, the signal disappears as the vessel is closed. A mean of 7 ligations is usually required

ensuring accurate identification, ligation and final occlusion of the artery and addresses problems with variable signal emitted by a sound only Doppler device (Figs. 3, 4). This technique may also be of benefit for training in

doppler-guided haemorrhoidal artery ligation and reducing operative time.

**Conflict of interest** None.