



The Kraske procedure: no more indications for benign lesions?

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Dear Sir,

The Kraske procedure, which is a posterior transsacral approach to the rectum including sacral transection, has been reported to be a safe and effective procedure for various benign and selected malignant conditions [1–3]. However, some complications and sequelae can develop that raises the question of their indications for benign diseases.

A 70-year-old patient with a past medical history of smoking, cardiomyopathy, abdominal aortic aneurysm, renal failure, and obesity (body mass index of 35.5 kg/m²) was referred to our colorectal unit for several complications following a Kraske procedure. Indication for surgery using this approach was severe dysplasia in a 3-cm-wide villous adenoma situated on the posterior wall of the middle rectum. The sacrum was transected at the level of S3. Pathological results confirmed complete excision of the benign lesion. Early post-operative outcome was uneventful except local pain, but the patient secondarily complained from persisting severe pain, constipation, posterior rectocele with obstructive defecation syndrome, fecal incontinence, sexual impotence, and dysuria. Colonoscopy showed no abnormality. Anorectal manometry revealed normal resting pressure, decreased voluntary squeeze pressure and absence of the rectoanal inhibitory reflex. Defecography showed a posterior rectocele that necessitated digital maneuvers to evacuate the rectum (Fig. 1a). Treatment first consisted in a rectocele repair using rectal muscular plication with non-absorbable stitches and insertion of a synthetic mesh through a posterior cutaneous approach, with good anatomical results at 6 months (Fig. 1b). The patient reported only partial improvement of pain and dyschezia and still complained

of fecal incontinence, dysuria, and impotence. We, therefore, proposed sacral nerve modulation with an electrode inserted in the second right sacral foramen (Fig. 2). The patient's fecal incontinence improved from a baseline Jorge and Wexner score of 9/20 to a 6-month score of 2/20, and he was very satisfied with the result of the stimulation on sexual function, reporting spontaneous morning erections. His dysuria also improved although only partially. Global quality of life improvement led to practice of physical activities and a 17 kg weight loss. However, late recrudescence of pain necessitated reintroduction of level 2 pain killers and introduction of antidepressant drugs. Last, we proposed a transverse definitive colostomy to the patient to decrease the pain level.

Beside local pain, dyschezia, fecal incontinence, dysuria, sexual dysfunction, and posterior rectocele like in this case, other complications have been reported such as rectocutaneous fistulas, perineal infections [4], incisional hernia [1], and local failure in case of cancer [1].

The Kraske procedure is nowadays rarely proposed to treat benign rectal lesions [5], due to the development of new techniques, such as laparoscopic or robotic procedures and transanal endoscopic microsurgery.

The Kraske procedure minimizes exposure of mid-rectal lesions without the morbidity of a major abdominal approach in particularly frail, obese patients. However, high transection of the sacrum does carry a high complication rate and thus should be utilized selectively in managing patients with rectal tumors not amenable to other treatment, in case of sacral invasion by malignancy, or in case of primary sacral tumors.

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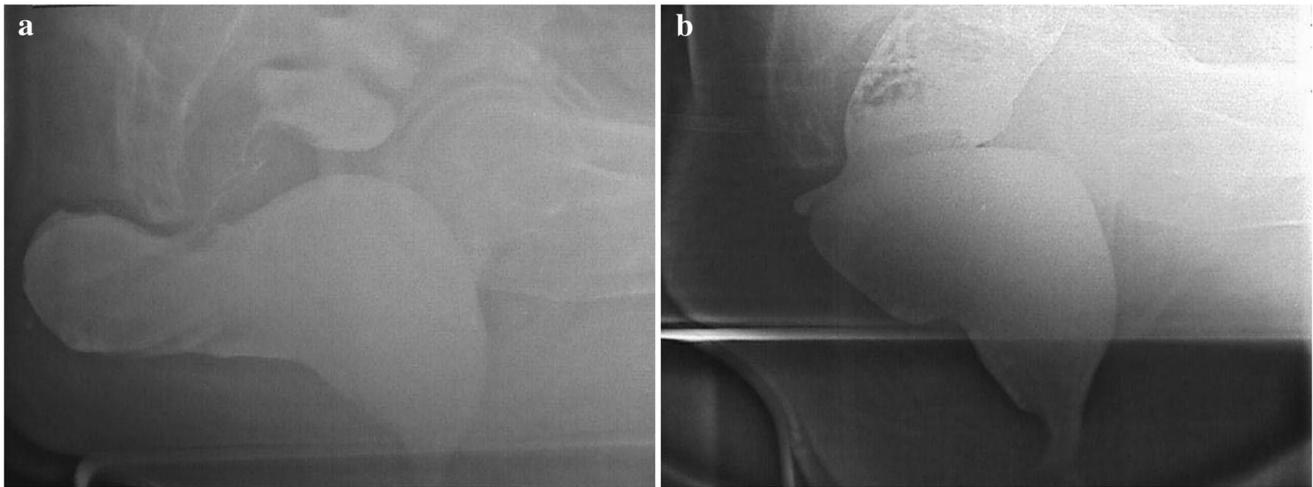


Fig. 1 **a** Defecography showing a posterior rectocele developing beneath the sacral section; **b** control defecography showing reduction of the size of the rectocele



Fig. 2 X-ray showing sacral nerve modulation with the electrode situated in the second sacral foramen

Ethical approval This article does not contain any studies with human participants performed by any of the authors.

Informed consent For this type of study, formal consent is not required.

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Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.