J.O. Larkin, P.A. Carroll, P.H. McCormick, B.J. Mehigan: Control of splenic bleeding during splenic flexure mobilisation by devascularisation of the inferior pole of the spleen

S. Uranues

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The vascular anatomy of the spleen can vary greatly. Though the upper and lower poles are very often supplied by their own pole arteries, the segmental vascular distribution in the parenchyma is not clearly delimited. Intraparenchymal vascular connections prevent tissue death after the polar artery has been severed. Here, the sinusoidal structure of the parenchyma plays a central role, because the arteries ultimately empty into this sinus, where the veins have their origin. A change in pressure distribution due to lack of arterial supply causes reverse flow. The venous connections between the spleen segments are more pronounced than those of the arteries and so prevent necrosis if arterial flow stops [1]. Even transection of the artery and vein of one pole has no particular consequences; there is mostly atrophy of the segment involved, an infarction is rare. There is a risk of infarction only after complete occlusion of the main artery before the polar vessels arise, and they usually branch off several centimetres before the hilus.

For this reason, ligation of the artery and vein of one pole does not particularly threaten the survival of the parenchyma in the area supplied [2]. But it is not a safe method for haemostasis if the bleeding comes from a deep parenchymal laceration. A superficial lesion does not, however, require vascular transection as such injuries usually respond to simple compression and fibrin glue and tend to stop bleeding spontaneously. There are many

reports of this in trauma surgery [3]. Almost all grade I and II splenic injuries can be handled non-operatively because they heal spontaneously and do not cause significant blood loss. With similar intraoperative injuries to the splenic capsule and superficial parenchymal lacerations, transection of the respective polar artery is overtreatment that can lead to unnecessarily extensive surgery and in the worst case, to loss of the spleen when the main vessels are injured accidentally during this manipulation.

The procedure that the authors recommend is more extensive than necessary and endangers the spleen [4]. This approach might be justified in exceptional cases, but it cannot be generally recommended.

Conflict of interest None.

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S. Uranues (✉)
Department of Surgery, Medical University of Graz,
Auenbruggerplatz 29, 8036 Graz, Austria
e-mail: selman.uranues@medunigraz.at