

CASE REPORT

Management of a Non-deflating Foley Catheter During Hysterosalpingography Using Ultrasound Guidance

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ABSTRACT

Foley catheters are often used during hysterosalpingography examinations for the purpose of delivering contrast. Among the list of complications with hysterosalpingography, however, the problem of a non-deflating Foley catheter balloon is rarely described. Potential factors predisposing to nondeflating balloons include faulty catheter balloon valves and the use of inflating fluids, such as saline that may crystallize and allow debris to block the balloon channel.¹ We describe an incident of non-deflating Foley catheter during a hysterosalpingography examination and the use of a guide wire to dislodge the debris blocking the balloon port under ultrasound guidance.

Key Words: Complications, Hysterosalpingography, Non-deflating Foley catheter

CASE REPORT

A 37-year-old female patient underwent hysterosalpingography (HSG) examination for recurrent miscarriage. An indwelling 8F Foley catheter (Norta®, Beiersdorf AG, Hamburg, Germany) was passed into the uterine cavity during the procedure. Before the Foley catheter insertion, the balloon was tested for deflation. The hysterosalpingograph revealed blockage of the right oviduct at the isthmus while the L oviduct was patent. At the end of the examination, gentle traction failed to remove the indwelling Foley catheter. Ultrasound examination showed a non-deflating balloon in the uterine cavity. The catheter was then transected above the valve but no deflation occurred. Thereafter a 0.018 inch Cope Mandril guide wire (Cook® Bloomington, Indiana, USA) was inserted along the balloon channel under ultrasound guidance. The floppy end was first inserted but failed to deflate the balloon. Then the stiff end of the guide wire was advanced under ultrasound guidance (Figure 1). The debris at the valve of the balloon port was successfully dislodged. The balloon was then deflated and the Foley catheter was easily removed (Figure 2). The procedure was closely

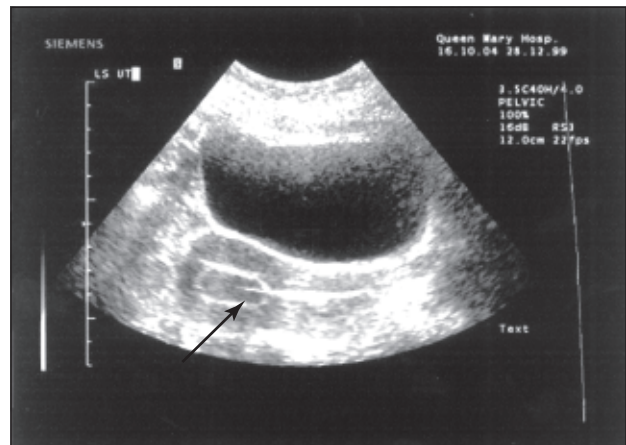


Figure 1. Under ultrasound guidance the stiff end of the guidewire (arrow) was advanced to dislodge the debris at the valve of the balloon port.

observed using ultrasound. The procedure was well tolerated and no discomfort or adverse effects were noted.

DISCUSSION

Non-deflating Foley catheter balloons are often encountered with Foley catheterisation of the urinary bladder. They are seldom experienced during hysterosalpingography, however, as these examinations are performed less frequently.

Although the basic approach to the management of a non-deflating Foley catheter during HSG is similar to

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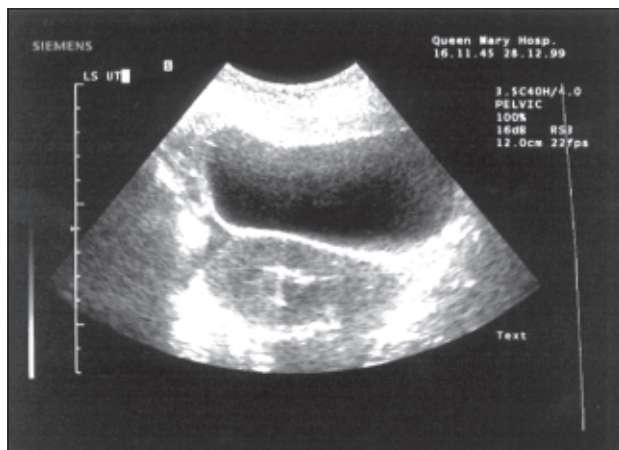


Figure 2. The balloon was deflated using ultrasound monitoring and the Foley catheter was easily removed.

that of the urinary bladder, the uterine cavity differs from the urinary bladder in several aspects. The uterine cavity is much less spacious than the urinary bladder, the uterine mucosa is more easily traumatised in women undergoing HSG examination, and extravasations of contrast occurs more easily especially after manipulation with stylet or guide wires. Continuous ultrasound guidance to avoid traumatising of the uterine mucosa is therefore essential when attempts are made to deflate the balloon.

When a non-deflating Foley catheter is encountered during HSG, the least invasive technique should be attempted first — that is to cut the Foley catheter proximal to the valve.^{1,2} If the balloon remains non-deflated, a guide wire should be advanced gently along

the balloon channel to dislodge any debris and break the faulty balloon valve.^{3,4} If there is still no deflation, balloon rupture can be attempted. This is achieved either by over-distension or by balloon needle rupture using transvaginal pericatheter routes.⁵⁻⁸ Balloon rupture using chemical means such as ether or mineral oil is not recommended as endometritis may result.⁹ After removing the ruptured balloon, the catheter should be checked for any missing pieces.

Throughout the procedure, continuous ultrasound guidance is essential to decrease the risk of traumatising the uterine mucosa during the process of deflating the balloon.

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