Circumferential Pelvic Antishock Sheeting

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INTRODUCTION

Pelvic ring fractures range from low-energy falls in the elderly to high-energy mechanisms in young patients. These injuries can be a significant cause of morbidity and mortality and are frequently associated with additional injuries. Hemorrhage and resultant hemodynamic instability are often associated with high-energy injuries and require prompt management. Circumferential pelvic antishock sheeting is an effective and readily available tool for reducing pelvic volume at the accident scene or in the emergency department, while still allowing access to the abdomen and lower extremities for ongoing resuscitation. This article, and the associated instructional video, reviews the indications and proper technique for placing a pelvic sheet.

Key Words: circumferential pelvic antishock sheet, pelvic ring instability, hemodynamic instability


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DISCUSSION

CPAS is a noninvasive tool used in the initial management of patients with unstable pelvic ring injuries. It serves to decrease pelvic volume, allow for clot formation, and provide temporary bony stability.3,7

Advantages of CPAS include the accessibility and low cost of sheets, continued access to the abdomen and extremities for ongoing evaluation, access to the groin through the creation of working portals, and the option to maintain reduction with the sheet during definitive fixation of the pelvic ring.2,3,8 Working portals are created by cutting a hole in the sheet in the area overlying the intended incision or access site. If iliosacral screws are being placed, fluoroscopy is used to mark the appropriate landmarks on the sheet to aid in determining the appropriate portal location before cutting the sheet and prepping the skin.3,9

Potential complications of CPAS include skin breakdown, underestimation of injury severity, and worsening of neurovascular injuries with aggressive application.3,9,10
Schaller et al described a case in which a patient developed bullae around the pubic symphysis and greater trochanters because of pressure from the sheet, delaying definitive surgical intervention. Therefore, it is recommended that additional stabilization of the pelvic ring be pursued as soon as it is medically safe for the patient.

In summary, CPAS is a valuable and inexpensive method to provide initial stability in patients with pelvic ring injuries. Careful attention must be paid to the skin and neurovascular status to avoid complications.

REFERENCES