Abdomen was closed after thorough wash out with normal saline. No other effects of cardioplegia-ischemia/reperfusion (I/R) and NS309 pretreatment calcium-activated potassium channels and dysregulation of coronary arterioles was noted. Metabolic syndrome (MetS) is associated with inactivation of endothelial SKCa/IKCa channels showing increased response to substance P and ADP as compared with controls (Lean). Furthermore, pre-treating the MetS or control (Lean) pig-microvessels with the SKCa/IKCa activator NS309 (10^-5 M) significantly improved the recovery of coronary endothelial function showing increased response to substance P and ADP as compared with no pretreatment alone (P < 0.05), but this protective effect is more pronounced in lean-pigs than that of MetS pigs (P < 0.05).

**Take home message:** This study demonstrates that cardiopulmonary ischemia/reperfusion impairs endothelial function and inactivation of endothelial SKCa/IKCa channels of the coronary microcirculation in the setting of metabolic syndrome.

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**Successful laparoscopic cholecystectomy for giant gallstone using a 'double-bag' technique in an obese patient**

Azzam Al-Amin*, Muhammad Shiwanii  
Barnsley Hospital, Barnsley, UK

**Introduction:** We describe a case of successful laparoscopic cholecystectomy using a “double bag technique” to retrieve giant gall stone. Laparoscopic removal of gallstones within the gallbladder, larger than 5 cm have rarely been reported in the literature.

**Case description:** A 44 year old woman presented to the outpatient surgical clinic with symptomatic gallstones. She otherwise had no other medical problems. However, her BMI was 40.9.

**Results and Conclusions:** Blood tests were within the normal range. Her ultrasound scan report showed ‘many gallstones within the body of the gallbladder, the largest approximately 1 cm’. During her laparoscopic cholecystectomy, a very large, 8cm gallstone was encountered in the fundus of the gallbladder. The gallbladder wall was opened and the stone extracted and placed in the right paracolic gutter, adjacent to the liver. A standard laparoscopic cholecystectomy was then performed. The gallbladder and the ‘giant stone’ were extracted separately. The former via "BertTM bag" 80ml capacity and latter via the “AnchorTM tissue retrieval system device TRS100SB2’ 235ml capacity – using the “pack and push the envelope” technique.

**Take home message:** This case highlights that it is possible to retrieve a giant stone laparoscopically, without the need to convert to open procedure, using the above technique. It is important for the surgeon to be familiar with the various tissue retrieval systems available.

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**Impaired coronary arteriolar function after cardioplegia-ischemia/reperfusion in pig with metabolic syndrome**

Jun Feng*  
Rhode Island Hospital, Providence, RI, USA

**Introduction:** Metabolic syndrome (MetS) is associated with inactivation of coronary endothelial small/intermediate (SKCa/IKCa) conductance calcium-activated potassium channels and dysregulation of coronary arteriolar endothelial function in animals and humans. We investigated the effects of cardioplegia-ischemia/reperfusion (I/R) and NS309 pretreatment on the in-vitro coronary arteriolar responses to endothelium-dependent vasodilators substance P and ADP in pigs with or without MetS.

**Case description:** The MetS pigs were developed by feeding with a hyper-caloric, fat/cholesterol diet and the control animals fed with a regular diet for 12 weeks (n=8/group). Coronary arterioles (90–180 micrometers in diameter) were dissected from the harvested left ventricle tissue sample of pigs with and without MetS. The changes in diameter were measured with video microscopy. Microvessel was perfused in the presence or absence of selective SKCa/IKCa activator NS309 (10^-5 M). The in-vitro coronary arterioles were then subjected to 60 minutes of cardioplegia–hypoxia (15°C) and 60 minutes of re-oxygenation.

**Results and Conclusions:** At the end of reperfusion, the microvessel was treated with the endothelium-dependent vasodilators substance P and ADP. The relaxation responses to the substance P and ADP after cardioplegia-I/R were significantly decreased in MetS vessels versus control (Lean), respectively (P < 0.05), indicating MetS causes more impairment of endothelium-dependent-relaxation as compared with controls (Lean). Furthermore, pre-treating the MetS or control (lean) pig-microvessels with the SKCa/IKCa activator NS309 (10^-5M) significantly improved the recovery of coronary endothelial function showing increased response to substance P and ADP as compared with no pretreatment alone (P < 0.05), but this protective effect is more pronounced in lean-pigs than that of MetS pigs (P < 0.05).

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