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FRUGAL INNOVATIONS IN MINIMALLY INVASIVE SURGERY

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Minimally invasive surgery not only improves cosmetic outcome, it has the potential to restrict the magnitude of the surgical injury, which in turn can attenuate the inflammatory and neuroendocrine response resulting in less postoperative pain and quicker recovery. In recent years, innovations in minimally invasive surgery go hand in hand with technological innovations. As these technological innovations are often industry driven, they are geared for a first world market. Frugal innovation involves designing solutions specifically for low-income settings. We will present frugally innovative measures that can make new surgical techniques also available in a low resource setting, so that more patients can benefit from the advantages of these new techniques. Natural Orifice Transluminal Endoscopic Surgery (NOTES) enables surgeons to operate in the abdominal cavity by scar free means. The Poor Man's NOTES technique for the treatment of ectopic pregnancy, ovarian pathology, adhaesiolysis and hysterectomy, will be presented. We will present the Poor Man's SILS technique that enables a surgeon to perform a hysterectomy through one small umbilical incision. We will demonstrate how innovations in smartphone development can replace expensive laparoscopic cameras, light sources, screens and recording devices, and can reduce the investment needed to start performing minimally invasive surgery by more than 90%. We will also present a frugal morcellation technique to reduce the risk of tumor spread when retrieving a specimen from the abdominal cavity during laparoscopic surgery.

Biography

Jan Baekelandt qualified as a Medical Doctor (1999) and specialist in Gynaecology and Obstetrics (2004) at the Catholic University of Leuven, Belgium. He subspecialized as gynaecological oncologist (2004-2006) in Pretoria (South Africa) and Köln (Germany). He currently consults at Imelda Hospital (Bonheiden, Belgium), specializing in gynaecological oncology, and robotic and endoscopic surgery. He is a pioneer in the emerging field of Natural Orifice Surgery and has published multiple papers on transvaginal Natural Orifice Transluminal Endoscopic Surgery (NOTES) and on frugal innovations in endoscopic surgery. He was first to introduce transvaginal robotic surgery.

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