



Minimally Invasive SCOLA Procedure for Abdominal Wall Defects: Diastasis Recti and Umbilical Hernia Repair – Case Report

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INTRODUCTION

Diastasis recti (DR) is defined as the separation of rectus abdominis muscles by more than 2.2 cm and may be classified as mild (<3 cm), moderate (3–5 cm), or severe (>5 cm). It is frequently associated with ventral hernia (VH), reported in up to 45% of cases. This association occurs due to weakening of the abdominal wall, predisposing to herniation.

Traditional open repairs involve larger incisions, higher infection rates, suboptimal cosmetic outcomes, and prolonged hospital stays. Subcutaneous Onlay Laparoscopic Approach (SCOLA) has emerged as a minimally invasive alternative that simultaneously addresses DR and VH, with advantages in safety, reproducibility, and cosmetic outcomes.

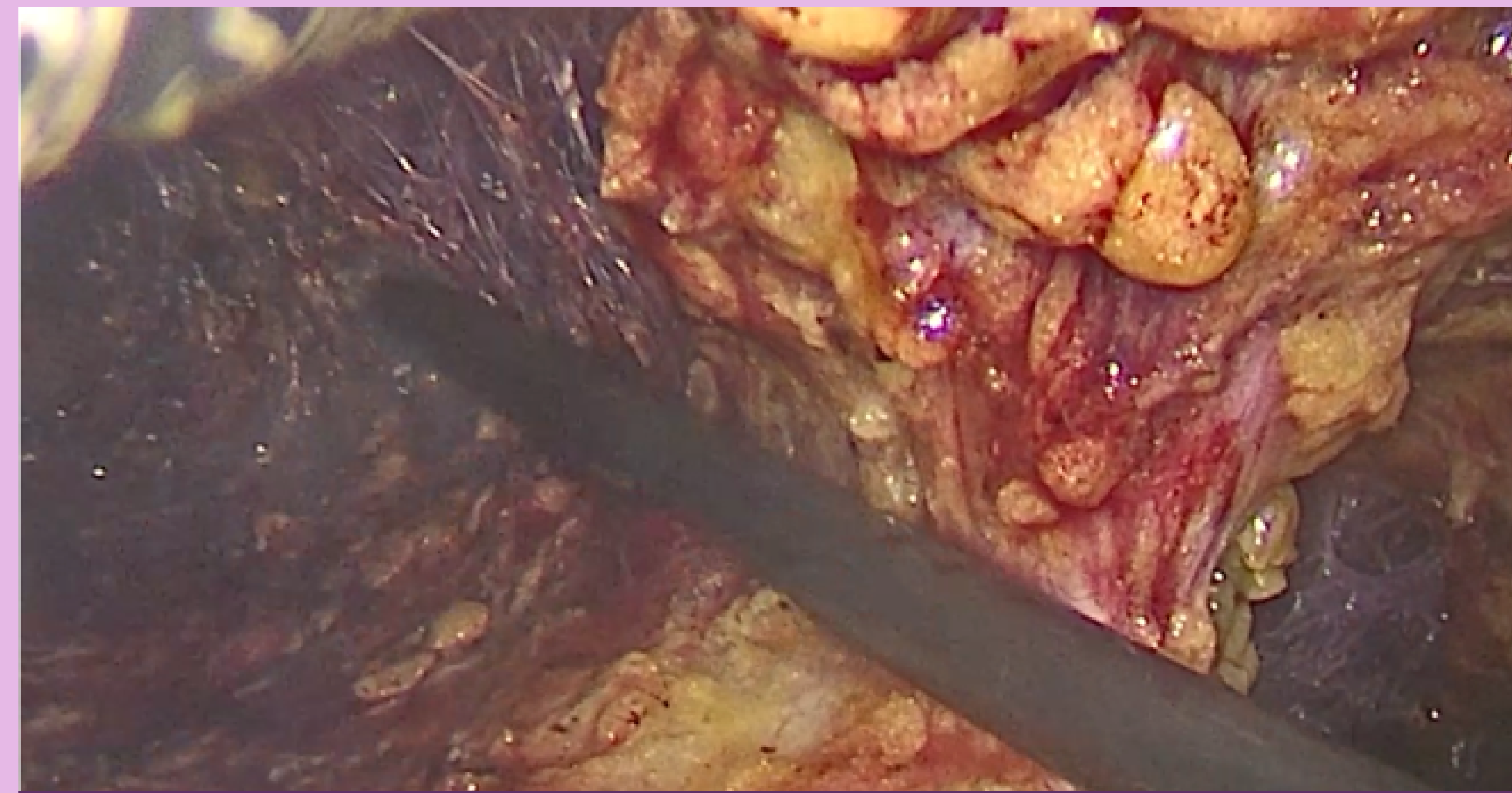
OBJECTIVE

The objective is to present the case of SCOLA approach in a patient diagnosed with umbilical hernia and rectus diastasis, along with a review of the literature.

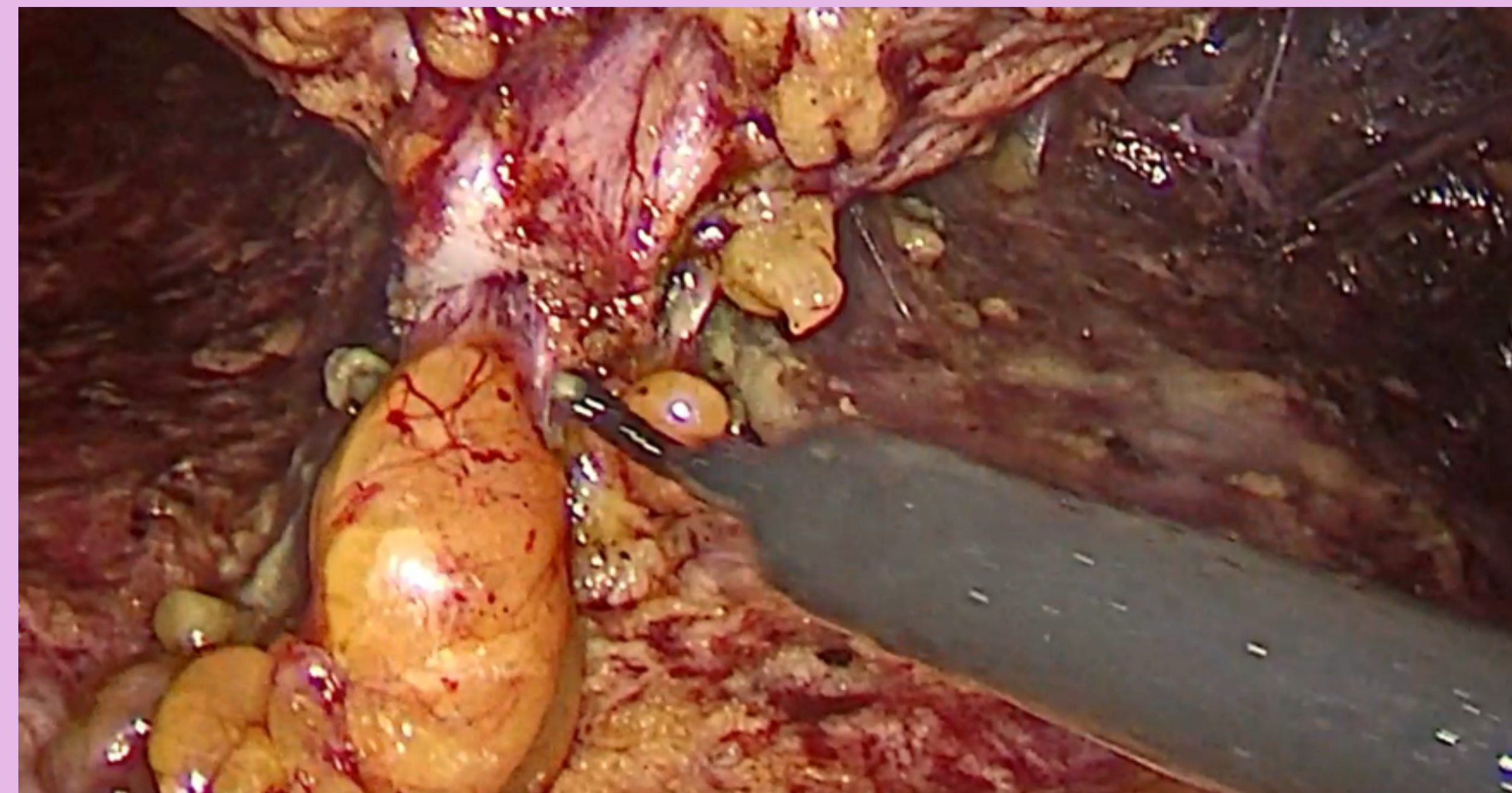
CASE PRESENTATION

We report the case of a 39-year-old female with a one-year history of progressive umbilical hernia, exacerbated by Valsalva maneuvers and occasionally painful. On examination, she presented with a 2 × 2 cm reducible umbilical hernia and associated rectus diastasis. Computed tomography confirmed a 2 cm umbilical hernia containing preperitoneal fat and a 4 cm rectus diastasis.

The patient underwent SCOLA for plication of rectus diastasis and umbilical hernia repair. A suprapubic 10 mm incision and two additional 5 mm incisions were created to establish the subcutaneous working space.



Subcutaneous space

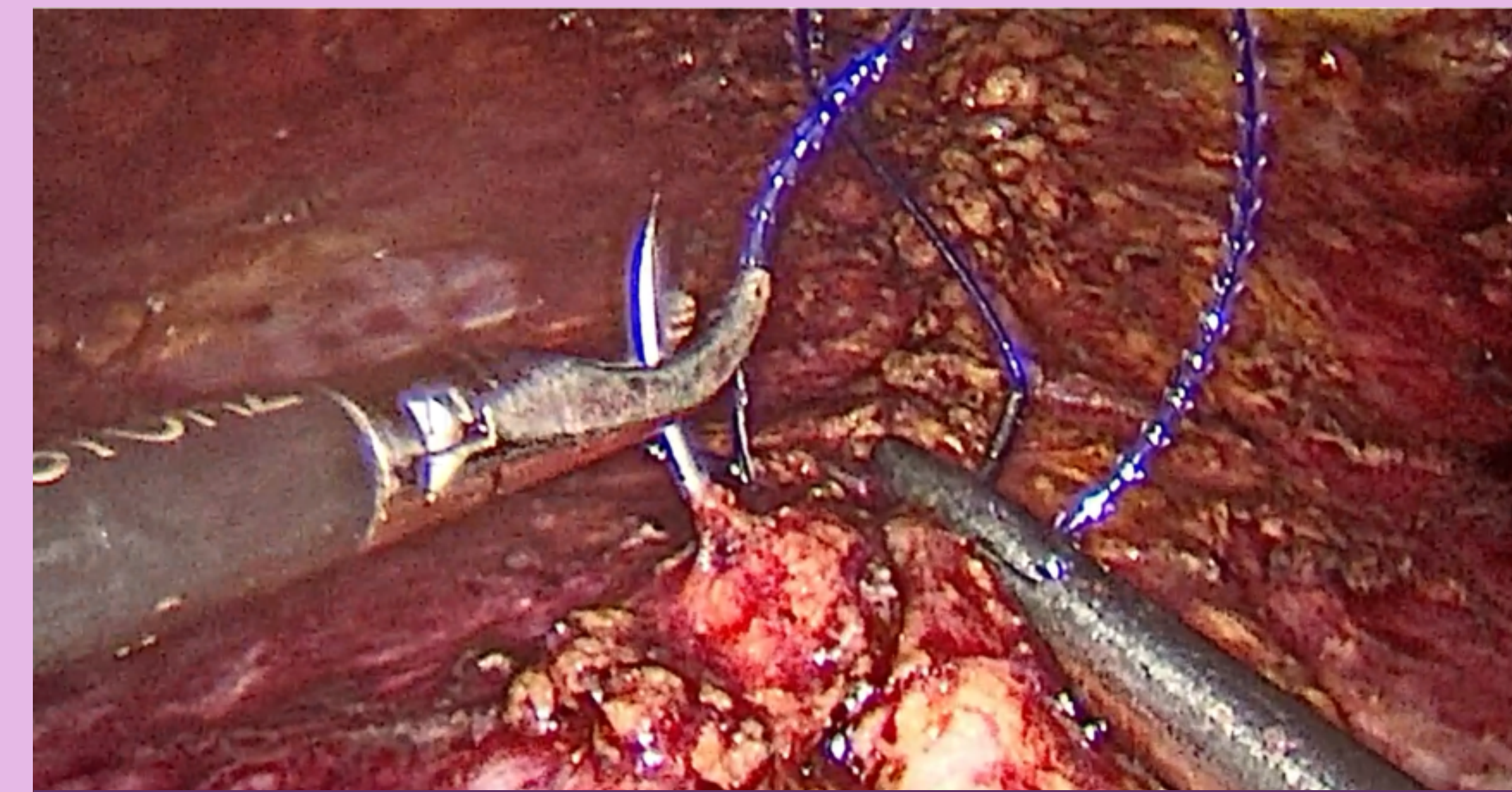


Umbilical hernia

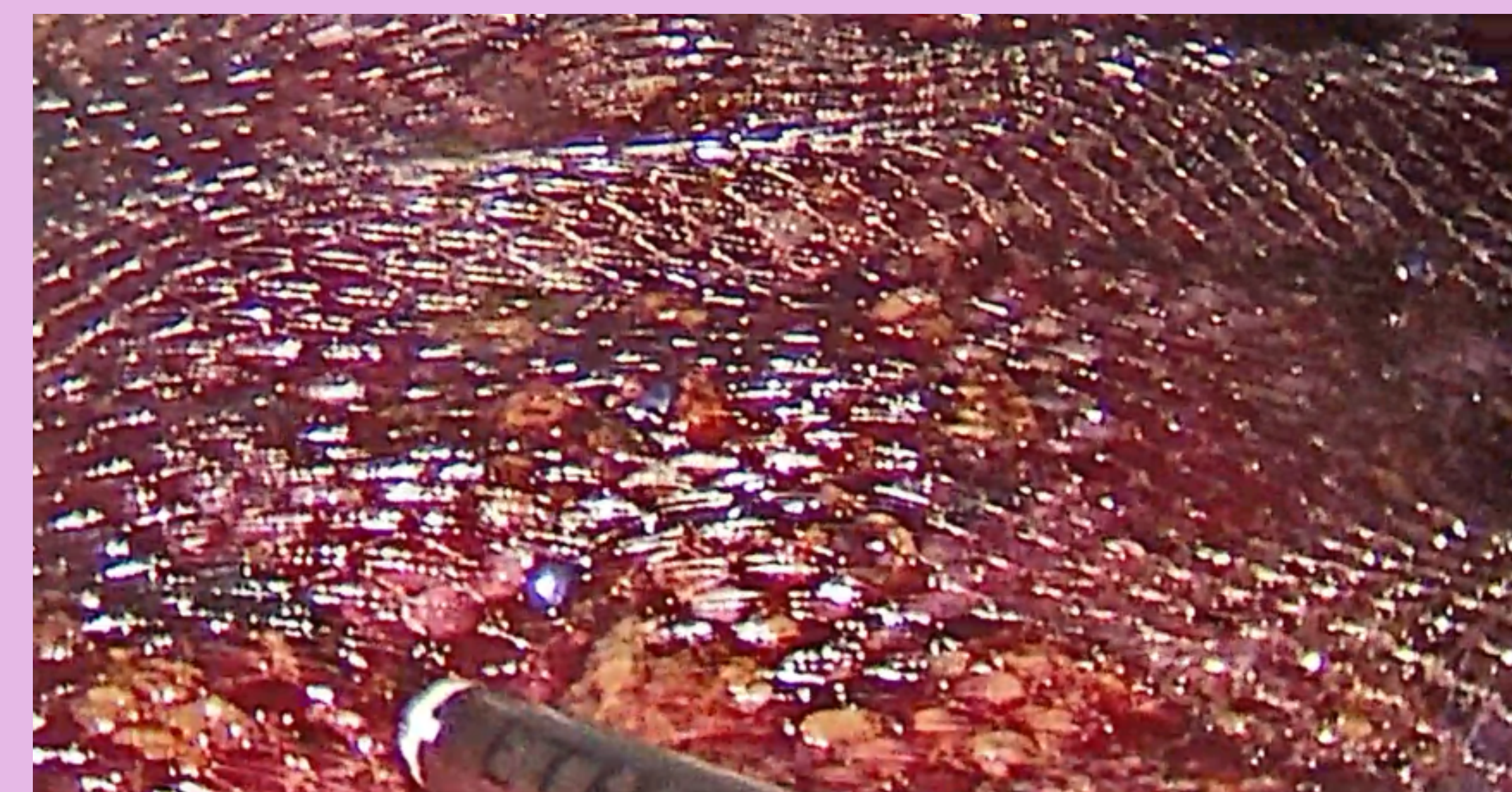
Dissection of the entire subcutaneous space was carried out in an ascending fashion up to the xiphoid process from the suprapubic region, and laterally to the lateral borders of the anterior rectus abdominis muscles.

Then, the umbilical scar was freed, where an umbilical hernia with protrusion of preperitoneal fat was identified.

The umbilical junction was dissected, and closure of the hernia defect was initiated with reduction of the hernia sac contents using V-Loc 2-0.



Rectus diastasis plication



Mesh in subcutaneous space

Rectus diastasis plication was performed with Stratafix from the xiphoid to the suprapubic region. A 24 × 19 cm mesh was placed in a craniocaudal orientation and secured with Securestrap staples. The umbilical scar was reconstructed with 3-0 Vicryl, a Blake 19 drain was placed, and trocar sites were closed with 3-0 Vicryl.

The SCOLA procedure was completed successfully without intraoperative complications. The patient had an uneventful postoperative recovery, with early mobilization, reduced postoperative pain, and satisfactory aesthetic outcomes.

CONCLUSIONS

SCOLA represents a safe, effective, and minimally invasive option for simultaneous repair of ventral hernia and diastasis recti. It provides restoration of abdominal wall integrity with superior cosmetic results, reduced morbidity, and faster recovery compared to conventional open techniques.

This case highlights the feasibility and reproducibility of SCOLA in abdominal wall reconstruction, supporting its role as a valuable alternative in surgical practice.

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