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FEMINIZING GENITOPLASTY IN TRANSGENDER FEMALES USING ADVANCE BIPOLAR VESSEL SEALING DIVICE



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Hypothesis / aims of study

Feminizing genitoplasty is a complex surgical procedure aimed at aligning genital aesthetics and function with a person's gender identity. The surgery presents multiple challenges beyond the operating room, including the need for careful case selection, thorough preoperative counseling, informed consent, and interdisciplinary collaboration for both preoperative preparation and postoperative rehabilitation.

Intraoperative challenges are substantial as well, including maintaining the prolonged lithotomy position, developing the rectoprostatic plane for neovagina creation, controlling intraoperative bleeding, managing surgical time, and addressing potential complications.

This report evaluates the impact of integrating an advanced bipolar vessel sealing device (ABVSD) on key surgical outcomes—specifically the duration of surgery, intraoperative blood loss, and length of hospital stay—in female transgender patients undergoing genital surgery.

The findings highlight the importance of advanced surgical technologies in improving patient outcomes and optimizing the efficiency of complex gender-affirming procedures.

Figure 1: Advance bipolar vessel sealing device

Results and interpretation

Of the patients studied, 62.7% were operated without using the advanced bipolar vessel sealing device (ABVSD), while 37.3% had surgery with it. The average age was similar between the two groups (29.8 years for non-ABVSD and 31 years for ABVSD). No significant differences were found in the duration of hormone therapy prior to surgery or in common comorbidities such as HIV infection and mental health conditions.

Key findings include:

- Operating Time: The ABVSD group had a significantly shorter average operating time (5.55 hours) compared to the non-ABVSD group (5.99 hours).
- Blood Loss: Patients in the ABVSD group experienced less intraoperative blood loss (365 ml) compared to the non-ABVSD group (502 ml).
- Hospital Stay: The average hospital stay was significantly shorter for the ABVSD group (3.8 days) compared to the non-ABVSD group (7.7 days).
- Complications: The incidence of complications was low and similar between both groups, with no statistically significant difference.

These results suggest that the use of ABVSD in surgery can reduce operating time, blood loss, and hospital stay, without increasing the risk of complications.

Figure 2: Results



Study design, materials and methods

This retrospective observational study analyzed patients who underwent feminizing genitoplasty by the same surgeon between 2021 and 2023 in two centers.

The data was collected from clinical records and operative protocols of both centers. The sample size was 59, which included all patients operated on by the same surgical team during the study period at these two centers.

The surgical technique employed was modified penoscrotal inversion. Anesthesia was administered through a combination of epidural and general anesthesia. The data was analyzed using non-parametric statistics in Stata SE 17.0 software, based on the number of cases.

 Table 1: Characteristics of the Sample







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Variable	Ligasure	Frequency	%	Media (SD)	Median (IQR)	Min-max	P value
All		50	100.0				
	Yes	28	56.0				
	No	22	44.0				
Age (years)	Yes			29.1 (8.15)	27.5 (23-35)	18-52	
	No			31.0 (10.59)	28.5 (23-35)	19-60	.63
BMI	Yes			22.6 (3.39)	22.1 (21-23.5)	16.7-33.4	
	No			24.0 (2.97)	23.4 (22.3-26)	18.5-30.8	.058
Hormonotherapy	Yes			4.7 (3.22)	4.1 (3.1-5)	1-17	
(Years)	No			5.1 (5.26)	4 (2-5.5)	2-25	.49
Comorbidities	Mental illness	4	8.0				
	HIV	2	4.0				
SD: Standard Deviation, IQR: Interguartile Range, BMI: Body Mass Index, HIV: Human Immunodeficiency Virus,							

Conclusions

In this series, the use of an advanced bipolar vessel sealing device was associated with a shorter surgical operative time, less intraoperative bleeding, and a shorter hospital stay.

References

