COST-COMPARISON OF INTRACARDIAC AND TRANSESOPHAGEAL ECHOCARDIOGRAPHY TO GUIDE LEFT ATRIAL APPENDAGE OCCLUSION

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BACKGROUND

Echocardiographic imaging is paramount during left atrial appendage occlusion (LAAO).

Observational studies have demonstrated similar efficacy and safety of intracardiac echocardiography (ICE) from the left atrium and transesophageal echocardiography (TEE)¹,².

However, the high cost of ICE catheters may be a concern.

STUDY COHORT

Included for analysis

<table>
<thead>
<tr>
<th>TEE cohort (n=79)</th>
<th>ICE cohort (n=100)</th>
</tr>
</thead>
</table>

| 37 patients excluded due to missing data¹ |

| TEE cohort (n=28) | ICE cohort (n=9) |

RESOURCE USE IDENTIFICATION

Common cost excluded

- Pre-LAAO cardiac CT
- Pre-LAAO bed day and ward staff
- ECG, Blood sampling costs
- Utilities common to both procedures (transseptal needle, GW02 wire, pigtail)
- LAAO device and delivery sheath
- Discharge X-ray + Echocardiogram

DATA SOURCE

LAAO procedures between 2018-2016 (n=216)

RESULTS

The results are presented below as mean cost per patient in US Dollars.

<table>
<thead>
<tr>
<th>TEE cohort</th>
<th>ICE cohort</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admission day cost</td>
<td>4921 (CI: 4350-5697)</td>
</tr>
<tr>
<td>Pre-procedural turnover cost</td>
<td>1566 ± 568</td>
</tr>
<tr>
<td>Procedural cost</td>
<td>2341 ± 1300</td>
</tr>
<tr>
<td>Post-procedural turnover cost</td>
<td>938 ± 470</td>
</tr>
<tr>
<td>Post-procedure cost</td>
<td>26 ± 3</td>
</tr>
</tbody>
</table>

LIMITATIONS

- This is a single-center study based on a public healthcare system. Its generalizability may depend on the reimbursement system and healthcare structure.
- The results are estimates with uncertainty. They reflect only the cost variables included in the analysis.

CONCLUSION

The cost of ICE catheters appears to be balanced out by:

- No need for general anesthesia,
- Less personnel required per procedure,
- Reduced overall time used in the catheter lab.

Thus, ICE from the left atrium appears to be cost-neutral.

This may aid decision-making between TEE and ICE from the left atrium, from a health-economic perspective.

REFERENCES

¹ Korsholm K, Jensen JM, Nielsen-Kudsk JE. Intracardiac Echocardiography: From the Left Atrium for Procedural Guidance of Transcatheter Left Atrial Appendage Occlusion. JACC Cardiovasc Interv. 2017