Is Metabolic Syndrome A Marker Of Adverse Outcomes After Vascular Procedures: What Can Be Done To Improve The Situation

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Metabolic Syndrome

Risk factors of metabolic origin – insulin resistance
↑ insulin
↑ plasma glucose / ↓ glucose tolerance
truncal obesity
atherogenic dyslipidemia (↓ HDL, ↑ TG)
↑ blood pressure

prothrombotic state proinflammatory state

↑ risk of:
Cardiovascular disease
Type 2 diabetes

MetS associated with White Adipose Tissue and Inflammation

Need 3 of these 5 for diagnosis

Metabolic syndrome is an independent predictor of cardiovascular events in high-risk patients with occlusive and aneurysmal peripheral arterial disease.

Veterans Have Extensive Burden of Disease

Impact of metabolic syndrome on the outcomes of percutaneous renal angioplasty and stenting.

Impact of metabolic syndrome on the outcomes of superficial femoral artery interventions.
78 patients, CEA 2004-2008

\[ \text{restenosis with MetS} \]

\[ 32\% \text{ vs. } 8\% \]

Table 4. Cox proportional hazard analysis: Factors affecting restenosis

<table>
<thead>
<tr>
<th>Factor</th>
<th>HR (95% CI)</th>
<th>P</th>
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<tbody>
<tr>
<td>MetS present</td>
<td>4.81</td>
<td>0.01</td>
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79 patients, EVAR 2003-2011

\[ \text{survival with MetS} \]

\[ \text{Any endoleak (MetS) } 34\% \text{ vs. MetS } 11\% \]

Table 3. Presence of endoleak by type

\[ \text{Type II endoleak (MetS)} \]

\[ 34\% \text{ vs. MetS } 1\% \]

The influence of metabolic syndrome on hemodialysis access patency

187 patients, AVF 1999-2009

\[ \text{survival with MetS} \]

\[ 2^{nd} \text{ patency with MetS} \]

MetS in Vascular Surgery patients

\[ \uparrow \text{ risk of type II endoleak after EVAR} \]

\[ \uparrow \text{ restenosis after CEA} \]

What Can Be Done To Improve The Situation?

Vascular surgeons can:

\[ \text{Increase surveillance} \]

– Type II endoleak after EVAR

– Restenosis after CEA

\[ \text{Inhibit inflammation more aggressively} \]

– Doxycycline (N-TA\textsuperscript{3}CT trial)

\[ \text{Alternative repair strategies} \]

– Nellix

↑exercise and good diet associated with ↓MetS
Thank you!