Statin therapy and amputation-free survival in CLI patients: insights from the CRITISCH registry

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Disclosures

Speaker name:

Dr. Theodosios Bisdas

I have the following potential conflicts of interest to report:

- Consulting: Boston Scientific, Medtronic, COOK, Bard, Penumbra, Cordis
- Other: Vascupedia (Co-founder)
Statin Agents

I A

Treatment with a statin medication is indicated for all patients with PAD (88, 135-139).
AHA and ESC new guidelines
Statins in PAD and CLI patients

Statins are recommended in all patients with PADs.\textsuperscript{31,32}

In patients with PADs, it is recommended to reduce LDL-C to $< 1.8 \text{ mmol/L (70 mg/dL)}$ or decrease it by $\geq 50\%$ if baseline values are $1.8 - 3.5 \text{ mmol/L (70 - 135 mg/dL)}$.\textsuperscript{25}
Studies about statins in CLI patients

Limitations

- Studies with mixed populations (CLI/IC)
- Single-centre studies
- Retrospective study designs
- Evaluation of only one treatment strategy
- Data about statin administration only at hospital discharge

CRITISCH Registry

Multicentre, prospective and interdisciplinary registry

Sponsors
DGG, DIGG

Recruitment time
20
months
01/2013-09/2014

27
vascular centres

1200
consecutive CLI patients
(Rutherford 4-6)

First-line treatments
• Endovascular treatment
• Bypass surgery
• CFA endarterectomy alone
• No vascular intervention
  • Conservative treatment
  • Primary major amputation
Statin administration in CRITISCH cohort

1200 patients*

- 681 (57%) on statins at discharge
- 489 (41%) No statins at discharge
- 445 (65%) Statins continuously
- 236 (35%) discontinued
- 371 (76%) No statins continuously
- 118 (24%) started statins later and discontinued

*30 patients met the primary composite endpoint (amputation and/or death) during the in-hospital stay
Profile of CLI-patient receiving statins @ CRITISCH

Younger patients
History of coronary heart disease
Previous acute coronary syndrome
Previous vascular intervention
Rutherford class 4
Normal renal function
Lower mPREVENT III score
Amputation-free survival
Survival

Overall survival (OS)

Log-rank test: p<0.001
Freedom from major amputation

[Graph showing amputation-free time (AF) with two lines representing Statin and No statin. The graph indicates that the difference is not significant with a log-rank test p-value of 0.482.]

Not significant
Amputation-free survival

Bypass group

![Graph showing amputation-free survival in patients who received bypass surgery, comparing those on statin therapy to those not on statin therapy. The graph indicates a statistically significant difference with a p-value of 0.004.](image)
Amputation-free survival
Endovascular group

AFS in patients who received endovascular treatment

Log-rank test: p<0.001

Months

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n_risk: 145
Amputation-free survival
Diabetic and non-diabetic patients
Amputation-free survival
Chronic kidney disease
Amputation-free survival
Age > 75 years

[Graph showing Amputation-free survival in patients aged 75 years or older, comparing Statin and No statin groups with log-rank test p<0.001]
Best medical treatment in CLI

Amputation–free survival (AFS)

Logrank–test: p<0.001

Numbers at risk:

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<th>Months</th>
<th>Statin / No antiplatelet agents</th>
<th>Statin / Antiplatelet agents</th>
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%
Conclusions

Statins in CLI patients

• Improvement of amputation-free survival

• Higher survival rate in patients on statins

• No impact on major amputation rate

• Beneficial for both bypass and endo-treatment

• Increase of AFS in CKD/Diabetes and in older patients

• Compliance on current guidelines needs further optimization
Thank you

CRITISCH Collaborators:

T. Schmitz-Rixen, MD, (Frankfurt), M. Steinbauer, MD, (Regensburg), H.H. Eckstein, MD, (München), W. Lang, MD (Erlangen), H. Schelzig, MD, (Düsseldorf), H.J. Florek, MD, (Freital), M. Storck, MD, (Karlsruhe), B. Weis-Müller, MD, (Mönchengladbach), D. Böckler, MD, (Heidelberg), A. Billing, MD, (Offenbach), T. Hupp, MD, (Stuttgart), S. E. Debus, MD, (Hamburg), M. Spohn, MD, (Bamberg), H. Reinecke, MD, (Münster), C. Schlensack, MD, (Tübingen), W. Klonk, MD, (Cloppenburg), H. Wenk (Bremen), R.G. Ritter, MD, (Bielefeld), K.L. Schulte, MD, (Berlin), T. Keck, MD, (Lübeck), K. Balzer, MD, (Bonn), B. Mühling, MD, (Biberach), F. Adili, MD, (Darmstadt), T. Zeller, MD (Bad Krozingen)
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