DOES PRESCRIPTION of MEDICAL COMPRESSION PREVENT POST-THROMBOTIC SYNDROME after PROXIMAL DVT

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SHORT ANSWER

There are so many patterns of PTS after proximal DVT in terms of clinical severity, anatomical anomalies, physiopathological abnormalities that a global answer looks impossible to formulate.

CLASSIFICATION OF DVT

Presently classification of DVT in proximal and distal is a nonsense particularly for proximal localization.

Obviously you cannot put in the same basket a DVT affecting the popliteal or femoral vein to the one interesting the ilio-femoral axis in terms of possible future after effect.

It is the same for a PTS, an isolated femoral vein obstruction cannot be compared to ilio-femoral occlusion.

RCTs on COMPRESSION for PREVENTING PTS

3 RCTs are fully exploitable

BRANDJES	**1997**
PRANDONI	**2004**
KAHN	**2013**

2 others are more difficult to interpret for drawing conclusions.

PARTSCH	**2004**
ASCHWANDEN	**2008**

BRANDJES. 1997

Knee length compression for 2-Y vs. no compression

CONCLUSION : Compression prevents PTS. P < 0.001

BUT

- **Single center and small (#194) trial**
- **No iliac DVT location. Common femoral vein? 3-7%**
- **Type of assessment : Brandjes scoring, not validated**
- **Adherence to treatment : Excellent in 76%, Poor 3%**

PRANDONI 2004

Knee length compression for 2-Y vs. no compression

CONCLUSION : Compression prevents PTS. P= 0.011

BUT

- **Single center and small (#180) trial**
- **No iliac DVT location. Common femoral vein? 22.2-15.6%**
- **Type of assessment : Villalta scoring, validated**
- **Adherence to treatment : Excellent in 93%**

KAHN SOX trial 2013

Elastic compression stocking for 2-Y vs. placebo compression

Conclusion : No difference between the 2 groups in terms of PTS.
P = 0.58
Interpretation *ECS did not prevent PTS after a first proximal DVT, hence our findings do not support routine wearing of ECS after DVT*

- **Multi center and large (# 806) trial**
- **DVT location : Iliac : 11.5 %. Common femoral vein : 27%.**
- **Adherence to treatment : variable according to duration of F-U**
  Adherents (3 or more days per week/10-11 hr. day)
  1 month 86.4%
  24 months 55.6%
- **Type of assessment : Ginsberg criteria and Villalta scoring, both validated**

COMMENT

The compression proponents have expressed many criticism on the methodology used in Kahn's article more or less relevant, but according to available data it looks that considering adherent patients as defined in this study is realistic.

RAJU 2007.

Conversely Prandoni and Brandjes are not.

COMMENT

Unfortunately the DVT localization is poorly documented in the Brandjes and Prandoni's studies.

Nevertheless there was no iliac DVT in the 2 RCT's and results according to DVT localization are not provided.

In Kahn's study the location of initial DVT is detailed as well as outcome according to DVT localization.

DISCUSSION

The question we have to answer is simple, Does prescription of medical compression prevent PTS after initial proximal DVT.

DISCUSSION

Prescription of medical compression for preventing PTS is now in doubt. Immediate compression after diagnosis of acute DVT to prevent swelling and reduce pain, permitting early ambulation in combination with adequate anticoagulation has proven benefit although a recent article questions this issue.

Kahn Thromb et hem 2014

DISCUSSION

Early thrombus removal in iliofemoral extension seem to be beneficial and scientific evidence is expected from the ongoing ATTRACT trial in the US that should give us guidance in 2016.
Continued long-term compression treatment is now under debate after the SOX trial.

CONCLUSION

Two major questions remain :

1/ Is positive outcome on the development of PTS after « proximal » DVT due to the fact that there are few patients with iliofemoral extension in the RCT's that are in favor of medical compression treatment.

CONCLUSION

Two major questions remain

2/ Compliance is the major issue. Two RCT's with excellent control of compliance showed significant reduction in the rate of PTS. But the adherence to compression in Brandjes and Prandoni RCT's are not realistic.

CONCLUSION

Many studies are needed before drawing conclusions concerning effectiveness and value of compression as well duration wearing to prevent PTS after proximal DVT.