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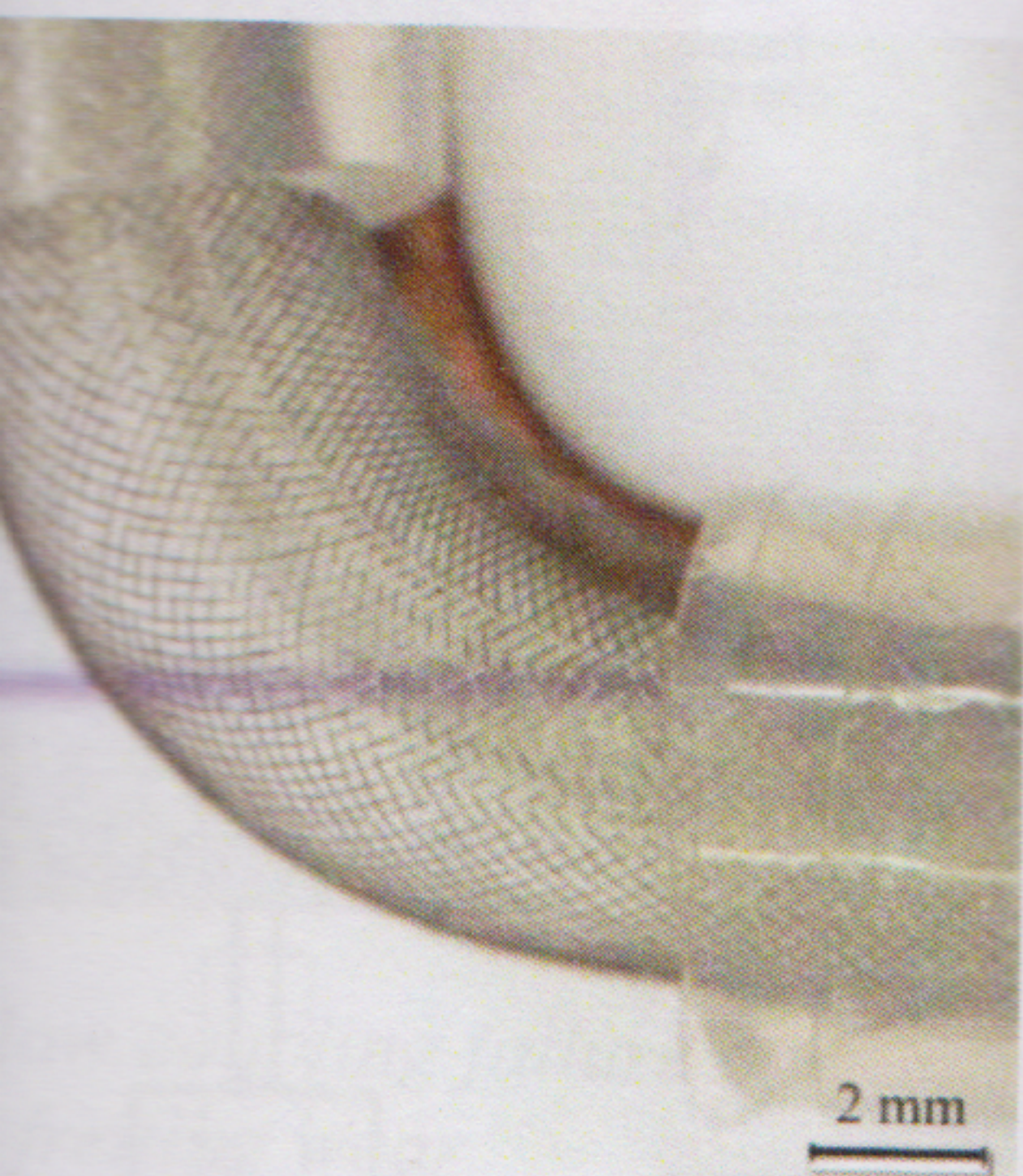
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logy

the sample were taken using a
oscope (Olympus SZX16,
kyo, Japan) in the chosen
s in three different directions:
to the internal and to the
atures and to the middle
bends (Figure 1).



stent bended in 90°, middle
projection

the change of the muster, a
eded that holds the sample
microscopy in the required
der has to be able to hold the
multiple positions, so we could
the surface while the holder
ct the muster itself. After
outer diameter of the samples
silicone tube of internal
5 mm, so the clamping has
the muster during the

monitoring. The different angulations were stabilized by wires. The wires were bent to the required angle and the silicone tubes were fixed to these. Then the samples were put in the tube thus formed a bent position required for measurement (Figure 2).

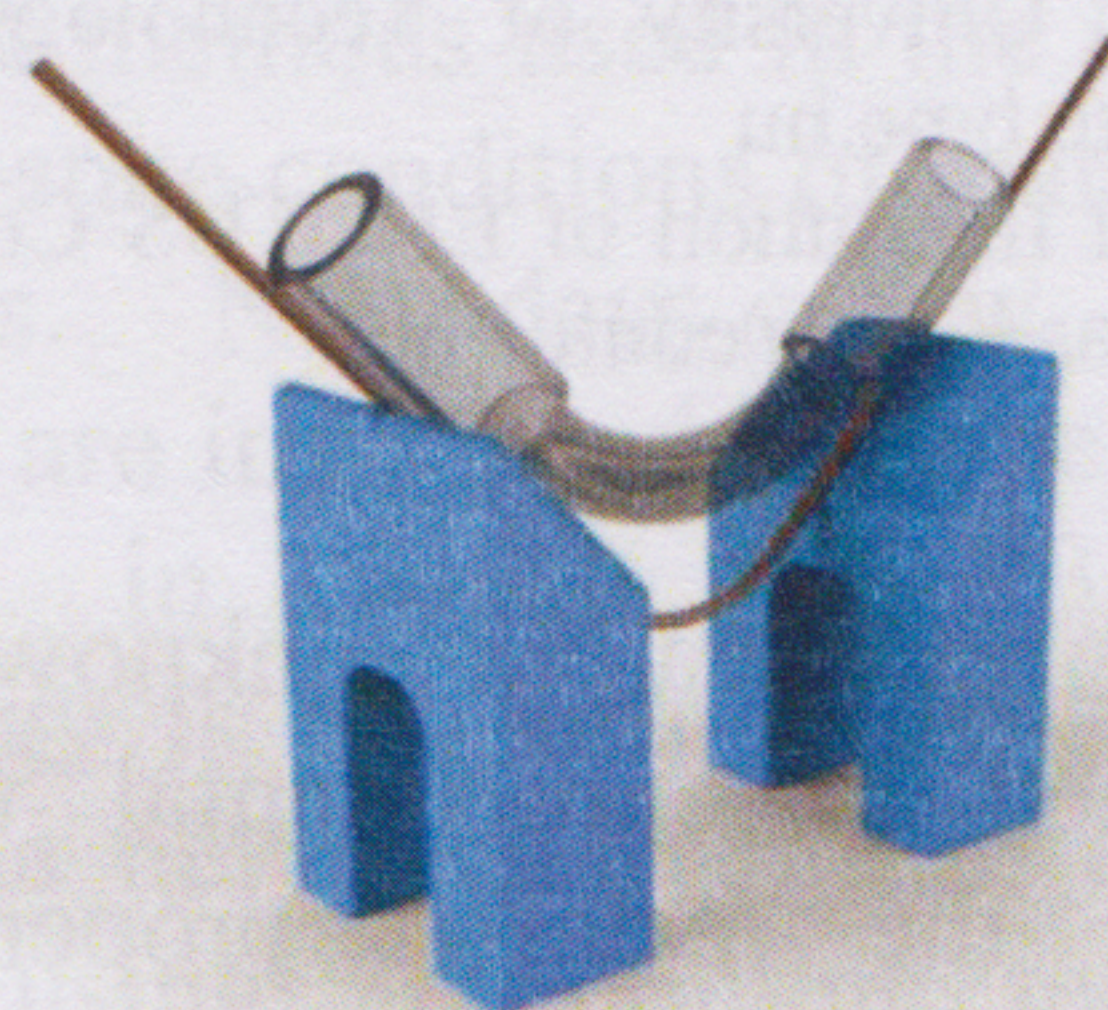


Fig. 2. The stent positioning holder

Using the software ImageJ (Version 1.49k 9 November 2014) the area of the whole section was measured and on the principle of separation of lighter and darker areas the program could measure the percent of the MSA of the section.

3. Results

Tab. 1 contains the MSA results for each bending angle and projection.

Tab. 1. MSA values in the observed projections

Projection	MSA (%)	Projection	MSA (%)
0°	35.9		
30°		90°	
external	40.8	external	35.6
middle	29.28	middle	33.7
internal	49.9	internal	57.3
45°		120°	
external	52.3	external	33.9
middle	26.16	middle	31.45
internal	50.9	internal	33.6
60°		135°	
external	30.36	external	36.11
middle	21.4	middle	35.1
internal	51.4	internal	35.9

At the most bending angles the ratio of MSA highest on the internal curvature and smallest on the middle surface. The difference tended to be smaller with increasing bending angle, converging to the straight state of the FD.

4. Conclusions

Bending has a significant influence on the wire pattern of FD-s. The effective MSA is strongly related to the position of the aneurysm orifice along the circumference of the parent artery. As MSA is thought to be one of the key factors in the effect of FD-s, and because most aneurysms are located on curved vessels, this phenomenon may have an impact on the clinical efficacy of these devices and should be considered in treatment plannin.

Acknowledgements

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References

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