

Claims

5 1. Implant to be used for the occlusion of aneurysms (A) in blood vessels (Z) in the region of vascular branches (X, Y), in particular bifurcation aneurysms, with the implant (1) being in an expanded state in which it is implanted in the blood vessel (Z) and in a contracted state in which it is movable through the blood vessel (Z), with the implant (1) having a proximal fixing section (3) by means
10 of which the implant (1) can be secured to the wall of a blood vessel (Z), a distal section (5) where the implant (1) is radially widened relative to the fixing section (3) and which is intended for placement in or in front of the aneurysm (A), and having a transition section (4) located between the fixing section (3) and the distal section (5), wherein the implant (1) is composed of interconnected or intersecting filaments (10) and one or more filaments (10) originating from the fixing section (3)
15 or distal section (5) meet centrally in the transition section (4), wherein the filaments (10) in the transition section (4) at least to some extent pass through a sleeve (7) and wherein one or several filaments (10) are provided with an eyelet (8) in the transition section (4), wherein the sleeve (7) extending at least sectionally through the eyelet (8) and the eyelet (8) restricting the mobility of the sleeve
20 (7) in the longitudinal direction of the implant (1).

 2. Implant according to claim 1, characterized in that the sleeve (7) is formed of a wire coil with an inner cavity.
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 3. Implant according to claim 1 or 2, characterized in that the sleeve (7) is made at least partially of a radiopaque material.

 4. Implant according to any one of claims 1 to 3, characterized in that in the transition section (4) several filaments (10) are extending through the
30 sleeve (7).

5. Implant according to claim 4, characterized in that the filaments (10) in the transition section (4) run parallel to each other.

6. Implant according to any one of claims 1 to 5, characterized in that stoppers are arranged proximally and/or distally of the sleeve (7) which prevent the sleeve (7) from sliding or slipping beyond the stoppers.

7. Implant according to any one of claims 1 to 6, characterized in that the distal section (5) comprises a plurality of struts, loops (12) or arches that at least partially are facing radially outward.

8. Implant according to claim 7, characterized in that the struts, loops (12) or arches form an angle β ranging between -45° and $+175^\circ$, preferably between $+45^\circ$ and $+90^\circ$ in relation to the longitudinal axis of the implant (1), wherein a positive angle β stands for struts, loops (12) or arches pointing radially outwards and a negative angle β for struts, loops (12) or arches pointing radially inwards.

9. Implant according to claim 7 or 8, characterized in that the loops (12) or arches are provided inside with a membrane (11) or that a membrane is spanned between the struts.

10. Implant according to any one of claims 1 to 6, characterized in that the distal section (5) is radially widened so as to form a spherical, mushroom, anchor, or ellipsoidal shape.

11. Implant according to any one of claims 1 to 10, characterized in that one or several separation elements are arranged centrally in the distal section (5), said separation element at least partially occluding the neck of the aneurysm (A) in the implanted state.

12. Implant according to claim 11, characterized in that the separation elements are formed from fibers, threads, wires or membranes (11).

13. Implant according to claim 12, characterized in that the membrane (11) extends in proximal direction and, preferably, has a conical or pyramid form.

5 14. Implant according to claims 12 or 13, characterized in that the membrane (11) has one or several openings or that in the membrane (11) one or several openings can be produced by a piercing method.