

ABSTRACT

TITLE

Method for obtaining implantable medical bioprotheses

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This invention relates to a method for obtaining an implantable medical bioprosthesis comprising substances from animal tissue, comprising a step during which a bioprosthesis is positively selected for its implantation in the body of said patient when (i) the phenotype in ABO/ABH system of said bioprosthesis is compatible with (ii) the phenotype in ABO/ABH system of said patient.

CLAIMS

1. Method for obtaining an implantable medical bioprosthesis in a patient comprising substances from animal tissue, comprising a step during which a bioprosthesis is positively selected for implantation in the body of said patient when (i) the phenotype in ABO/ABH system of said bioprosthesis is compatible with (ii) the phenotype in ABO/ABH system of said patient.

2. Method for obtaining an implantable medical bioprosthesis in a patient comprising substances from animal tissue, including the following steps:

a) determine the phenotype in the ABO/ABH system of a patient in the body of which a bioprosthesis must be implanted,

b) determine the phenotype in the ABO/ABH system of one candidate bioprosthesis, or in several candidate bioprostheses,

and

c) positively select a bioprosthesis for its implantation in the body of said patient when (i) the phenotype in the ABO/ABH system of said bioprosthesis is compatible with (ii) the phenotype in the ABO/ABH system of said patient,

the order of execution of steps a) and b) being indifferent.

3. Method for obtaining an implantable medical bioprosthesis in a patient comprising substances from animal tissue including the following steps:

a) provide several bioprostheses whose phenotype in the ABO/ABH system is known, and,

b) positively select, within several of said bioprostheses, at least one bioprosthesis for its implantation in the body of said patient when (i) the phenotype in the ABO/ABH system of said bioprosthesis is compatible with (ii) the phenotype in the ABO/ABH system of said patient.

4. Method according to one of claims 1 to 3, characterized in that the substances from animal tissue contained in a bioprosthesis are chosen among substances from mammal, preferably a mammal chosen among porcine, bovine, ovine, kangaroo, seal, camel and equine.

5. Method according to one of claims 1 to 4, characterized in that said bioprostheses are chosen among the heart valve type bioprostheses, arterial bioprostheses, vascular bioprostheses, a patch or tissue, pulmonary bioprostheses, replacement or regeneration tissues.

6. Method according to claim 5, characterized in that said bioprostheses consist of heart valves chosen among the mitral, aortic, tricuspid and pulmonary valve.

7. Method according to one of claims 1 to 6, characterized in that the selection of a bioprosthesis, in step c) of the method of claim 2 or in step b) of the method of claim 3, is carried out in accordance with the following compatibility rules:

- for patients whose ABO/ABH phenotype is the phenotype A, a bioprosthesis is positively selected, when the ABO/ABH phenotype of said bioprosthesis is a phenotype chosen among A or H,
- for patients whose ABO/ABH phenotype is the phenotype O, a prosthesis is positively selected, when the ABO/ABH phenotype of said bioprosthesis is the phenotype H,
- for patients whose ABO/ABH phenotype is the phenotype B, a prosthesis is positively selected, when the ABO/ABH phenotype of said bioprosthesis is a phenotype chosen among B (human) or H,
- for patients whose ABO/ABH phenotype is the phenotype AB, a prosthesis is positively selected, when the ABO/ABH phenotype of said bioprosthesis is a phenotype chosen among A, B or H,

and

- for all patients, a prosthesis is selected positively, when the ABO/ABH phenotype of said bioprosthesis is not detectable.

8. Method according to claim 7, characterized in that the bioprostheses for which ABO/ABH phenotype is not detectable are chosen among (i) bioprostheses comprising substances from an animal which do not express some antigens of the ABO/ABH system, including a genetically modified animal and (ii) bioprostheses having received one or more chemical, enzymatic, biological or other treatments causing a change in antigen expression of ABO/ABH system.

9. Method according to one of claims 1 to 8, further characterized in that,

- the phenotype in the Lewis system, respectively (i) for one or more candidate bioprosthesis and (ii) for the patient, is known or determined,

and

- a bioprosthesis is positively selected when more than one compatibility is established for the phenotype in the Lewis system.

10. Method according to one of claims 1 to 9, further characterized in that,

- the phenotype in the Rhesus system, respectively (i) for one or more candidate bioprosthesis and (ii) for the patient, is known or determined,
- a bioprosthesis is positively selected when more than one compatibility is established for the phenotype in the Rhesus system.


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