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**Information about the human head and brain transplant is under progress.  
(Tbilisdi,Georgia)**

“Critical Care & Catastrophe Medicine”,Tbilisi,Georgia,2015,N15

The information given about human head and brain transplantation in under the assumption that.This process can take place,however,is a difficult and long road.

**Key Words:**Information,the human head,the brain transplantation,under progress

Modern evolution of medical technologies progression level gives ability to begin thinking and making specific actions to solve this problem that belong from first glance to fantastic area. Transplantation of the brain is new scientific area. Some attempts on this direction already had place in the beginning of the past century.

In this respect several decades goes research directly on nervous tissue transplantation. From 1980 year American researcher Gesh made transplantation of embryonic cells to the sugar-free diabetic rats as result showed decreasing of taken fluid and excreted urine. In experiments of Swedish scientific researcher gave results that during transplantation embryonic nervous cells continued life.

In 1982 year Droti Kriger made transplantation of one part of the brain to another rats after transplantation gonadotropin-releasing hormone were produced from 8 cases in 7 cases transplanted part of the brain functioned near to normal condition sexual activities restored in rats.

In 21 May of the 1908 year American physiologist Charles Claude Guthrie have made transplantation of the head of the dog to another dog. On the transplanted head of the two-headed dog have been registered elementary movement of the tongue and nose, pupil constriction. Full functionality of transplanted head has been achieved by Russian biologist Vladimir Demikhov in 1950 year. Two-headed animals lived 2-6 days in one case 29 days.

In 14 March of 1974 year group of American researchers led by Robert Wait made transplantation of the monkey head to another monkey. Animal lived several hours (after waking up there even was attempt of the bite). In 2002 in Japan some experiments have been done on rats. Real activities about this problem belong to Italian neurosurgeon Serkhio Cannavaro. He have made serious breakthrough on this case (Project GEMINI).

Previous works shows our plan of mention problem solving.

Cause for today there is not apparently way of connection CNS and its elements differed of Cannavaro model we concluded on model that provides one block transplantation of brain and spinal cord.

Let's agree: to give body name donor (D) and name brain with spinal cord recipient (R)

The plan of this operation in general is next: both of body's are cut lying down among 6-7 vertebra of the neck.

Before that manipulation on the D body is done unpacking of the entire vertebra, spinal cord nourishing blood vessels preparation. Without opening hard membrane output nerves from it will be cut the way that will be take out nerves with intervertebral ganglia. R body is manipulated the same way.

As result in the end of the first stage of operation we have two objects: R – Brain, neck with six vertebra and entire spinal cord. D – Body, neck from seventh vertebra without brain.

It is clear that for making this intervention have to be resolved many problems part of them more or less are studied part of them is not studied at all.

From surgical aspects we outlined next:

1. How to keep both bodies alive.
2. Have to be developed fast connection methods for the blood vessels and nerves
3. Have to be developed pine connection method
4. Have to be developed neck organ connection methods
5. Have to be developed exact plan for operation processing

Besides that have to be studied blood supply of the spinal cord (unlike of blood supply of the brain it is not studied at all) its resistance ability to hypoxia.

After processing this mount of operation for regeneration and reparation of tissures will be needed big mount of plastic material as outcome have to be developed methods for solving this kind of problem.

Have to be studded to how will function newly created organism in prolonged and fully denervation conditions.

If to above listed issues will be added immunology, anesthesiology, reanimatology and far more other problematic issues it becomes clear that this operation will be result of fundamental and multidiscipline scientific research conclusion.

Resolving each of the aspects of this problem will have big practical impact for different areas of medicine. In the end project outcome success or failure will be entirely depended on coexistence characteristics of D & R structures.

To explain simply for us it is completely unknown what will “Diseased” body replacement with “Healthy” body deliver and would we achieve willed result. It is not executed to discover the same pathology complications in the body.

Would older brain become young to the older body connection or it will be vice versa.

Implementation of our project in the country with limited resources is connected with additional problems. After resolving this problem specially setting up material and technical resources we are going to work by guidance of this plan:

First year

- A. Cultivation of the methods of fast connection of the spinal cord. Maximal time should not be out of 15 minutes range
- B. Cultivation of the methods of fast connection of the blood vessels. Putting of each anastomosis should not take more than 5 minutes.
- C. Cultivation of the methods of fast connection of the nerve. Putting of each anastomosis should not take more than 5 minutes.

Second year:

- A. Beginning experiments on animals
- B. Neck structure connection method refinement
- C. Study of spinal cord blood supply and its resistance ability to hypoxia

Third year: continuing experiments on animals

- A. On experimental animals cutting and recovery neck structures.
- B. On experimental animals cutting and recovery spinal cord nerves

Fourth year:

- A. Combined experiment (neck + spinal cord)

Fifth – Six year

Analyze results of previous experiment results.

Viability and reparation rehabilitation perspective study of absolutely denervated organism.

Seventh year:

Full – scale experiment tow on animals.

On the way of project implementation definitely will have place origin of new additional problems (for example: development of new methods for prolonged artificial ventilation - participation nerves electro stimulation).

Solving of each of this Issues will give big practical benefits we would add that in this project we have first innovations which already might be used in medicine.

For example connection of the spinal cord with right and left side threaded cylinder, use of Sucrose cylinders tubular structures (esophagus, trachea, blood vessels and nerves) for connection.

In the end have to be outlined that our project is fundamental multi discipline reserch and implementation of this research in the practical medicine will take many year hard work.

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- E. Cultivation of the methods of fast connection of the blood vessels. Putting of each anastomosis should not take more than 5 minutes.
- F. Cultivation of the methods of fast connection of the nerve. Putting of each anastomosis should not take more than 5 minutes.

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**ზ.ხელაძე, თ.კერძევაძე**  
**ინფორმაცია ადამიანის თავის და თავის ტვინის გადანერგვისათვის მზადების შესახებ.**

მოტანილია ინფორმაცია ადამიანის თავის და თავის ტვინის გადანერგვისათვის მზადების შესახებ. გამოთქმულია ვარაუდი, რომ ეს პროცესი შესაძლებელია შედგეს, თუმცა წინ რთული და ხანგრძლივი გზა არის.