

Poster 62

Background¹: The cochlear implant is an electronic device recommended for individuals with severe to profound hearing loss. There are several points of view and opinions, depending on the community that builds them, which arose an open discussion up until today.

Aim: Approach the impact of the cochlear implant in the deaf and hearing community and the different opinions towards the deaf construct

Methodology: Resorting to the PubMed, b-on, SciELO, and Google Scholar databases, using the keywords "Cochlear Implant", "Deaf Community", "Sensorineural Hearing Loss".

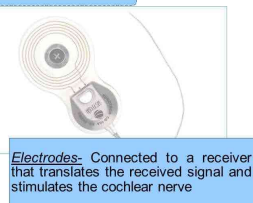
COCHLEAR IMPLANT²

- Electronic device that has been evolving over the years.
- Its main function is to provide individuals with severe to profound sensorineural hearing loss electrical stimuli from sound stimulation.

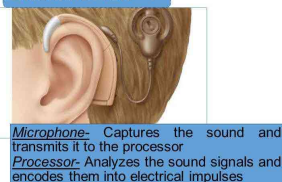
HISTORY OF IMPLANTATION^{3,4}

- 1745 • Alessandro Volta decided to prove that the electric battery he created was capable of triggering auditory sensations
- 1868 • R. Brenner aimed to relate the frequency and intensity of the stimulus to the location of the electrodes
- 1875 • Graham Bell demonstrated that acoustic vibrations can be transformed into electrical signals and vice versa
- 1930 • Wever e Bray described electrical potentials of the cochlea and suggested that replicating them could restore hearing
- 1957 • First active electrode in the vestibular nerve and a coil in the temporal muscle
- 1972 • Jack Urbancommercially developed na implantable device, and later on Clark developed the multichannel cochlear implant

INNER PART²:



EXTERNAL PART^{2,4}:



"The Cochlear Implant and the Deaf Construct"

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Contraindications⁴

- Increase or dysplasia of the cochlear nerve.
- Adults with pre-lingual deafness who have not developed their tongue.
- Not having the capacity to go through with the (re)habilitation process.

Risks²

- Tissue necrosis during surgery or healing.
- Facial palsy.
- Electrodes changing positions
- Occurrence of tinnitus and vestibular changes during the first postoperative week.

REHABILITATION⁵

- Aural (re)habilitation performed through cochlear implants aims to develop or restore the ability of hearing comprehension to patients suffering from severe to profound sensorineural loss.
- The success of the implantation of a CI depends on several factors, such as etiology, period of appearance and duration of the hearing loss, expectations and motivation of the parents, the family's involvement, and the way they communicate.

Impact of cochlear implant^{6,8}

- | Positive | Negative |
|---|---|
| <ul style="list-style-type: none"> Greater access to sound and development of spoken language (especially in children with profound deafness); Facilitates the child to integrate into hearing community. | <ul style="list-style-type: none"> Risks in the surgical intervention; Possible rejection by the child, and consequent frustration and anger. |

School Perspective⁷:

- Implanted individuals can demonstrate a delay in the acquisition of academic skills.
- After cochlear implant placement and proper rehabilitation, the child has access to acoustic information of the Portuguese language and benefits for their oral language development.
- The cochlear implant provides a significant improvement in the comprehension, reading and learning skills for children.

OPINIONS AND CLINICAL CASE^{8,9,10}

1 In this study participated: 2 Before and after surgery:

- 4 female teenagers.
- CI users.
- Age between 12 and 18 years
- 3 with maternal rubella etiology.
- 1 idiopathic.

3 Opinion regarding the IC:

- They acknowledge the benefit of the device.
- Reveal satisfaction in being able to hear.
- Possibility of integrating into the hearing world.
- A participant presents a feeling of shame, and another reveals a feeling of inferiority in relation to listeners.

Family Perspective

- Cochlear implants are more easily accepted by hearing families.
- Parent networks exist to help and facilitate connections with the community and provide emotional support.
- Some members of the Deaf community believe that these implants are a threat to their culture and language.

Medical Perspective

- Hearing loss is seen as a condition that needs to be diagnosed and cured.
- They believe that developing spoken language is important for integration into a mostly hearing world.
- Supporters of CI argue that it is a way to rehabilitate hearing through technology.

Conclusion¹¹: The cochlear implant provides better development of an individual's communication when implanted early, in contrast, it may lead to conflicts in the future in terms of identity. Although it's accepted by the majority of society, there still are obstacles in the deaf community concerning this kind of (re)habilitation.

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