

## **Storage Method For Bone Flaps After Decompressive Craniectomy, A Comparison Between Subcutaneous Pocket And Cryopreservation: A Retrospective Study Of 185 Cases**

**Dinesh Kumar Thapa<sup>1</sup>, Pankaj R Nepal<sup>1</sup>, Chandra P Limbu<sup>1</sup>**

*<sup>1</sup>Department Of Neurosurgery/ B&C Medical College Teaching Hospital/ Nepal*

### **Purpose**

Decompressive Craniectomy is performed for brain swelling to treat head injuries, malignant MCA infarction and sometimes in brain tumor surgeries when brain edema doesn't allow bone to be replaced. Subcutaneous pocket and Cryopreservation are two main ways of bone flap preservation in practice. There are few studies conducted comparing both the methods and few others has been conducted for surgical site infection after cranioplasty. Hereby we would like to share our experience of bone flap preservation in vivo and cryopreservation comparing bone flap resorption and surgical site infection.

### **Materials and Methods**

During two and half years period, 185 patients underwent decompressive craniectomy for head injuries, malignant MCA infarction and brain tumor surgeries, after which subsequently went for cranioplasty. The bone flaps taken from 123 patients were stored in abdomen subcutaneously and rests of 62 were stored using Cryopreservation. Demographic data and incidence of bone flap resorption and surgical site infection was compared in both group.

### **Results**

There were no significant demographic differences between the groups. Surgical site infection was occurred in 7 patients (5.69%) in the subcutaneous group and 3 patients (6.45%) in the cryopreservation group. The bone flap resorption was seen high in cryopreservation 9 (14.51%) than that of subcutaneous pocket 11(8.94%).

### **Conclusion**

Both subcutaneous pocket and cryopreservation are equally effective for the preservation of bone flaps. On the basis of bone flap resorption, Subcutaneous pocket is the choice for preservation and cryopreservation is slightly better than that of subcutaneous pocket on the ground of surgical site infection.