

additional 24 hours, after that if no pus collection found then cleaning and irrigation, then dressing. This procedure repeated daily until good healing insures which take about 7-10 days; and the ear leaves exposed later on.

After that the patient followed once weekly until complete healing which take 6-8 weeks. Pre and postoperative systemic antibiotic used such as Amikacin (15 mg/Kg/day), Gentamicin (5 mg/Kg/day), Carbenicillin (300 mg/Kg/day), or others according to culture and sensitivity tests. In all procedures swab from the drained pus sent for bacteriological study and sensitivity test.

### Results

The study comprised 46 males (46%) and 54 females (54%) with mean age of 24 years. The anterior surface of the ear involved in 85% and both surfaces in 15%, partial thickness burn in 90%, and full thickness burn in 10%. Unilateral chondritis; 90 patients (90%), bilateral chondritis 10 patients (10%). All cases are due to flame burn.

The results of bacteriological culture showed growth of *pseudomonas aeruginosa* in 62%, *klebsiella* in 22%, and *E.colli*, *staphylococcus aureus*, and *proteus* in 16% of the cultures.

Total loss of auricle occurred in 10% of ears, moderate deformity of auricle occurred in 80% of ears and mild deformity of auricle occurred in 10% of ears (Figure 3).

### Discussion

The skin of the ear is attached to the perichondrium without any subcutaneous tissue for protection so it is highly vulnerable for injury during facial burns in which ear burn is a common finding<sup>(17)</sup>.

In our study all cases are due to flame burn that is because the majority of cases of facial burns were due to flame burn because of wide usage of direct flame in the vast majority of domestic and industrial activities with carelessness and absence of strict adherence to safety measures and precautions at home or at work place, for that reason we used to receive sever ear burns, some of them came late to us and were badly

managed by different types of people like nursing staffs pharmacist other family members, people who use herbals for treatment of burned patients or selling these products and others.



**Figure 3. (A) Mild deformity (B) Severe deformity**

Prophylactic systemic antibiotics given to all patients from admission and changed according to the results of culture and sensitivity tests.

Daily follow up and close observation of patients for signs of chondritis this was very important in early detection and early treatment.

In spite of systemic antibiotics and local antimicrobial application no one can guarantee its prevention and nobody can predict which ear will develop chondritis, that can follows superficial or deep burns, and which may occur as early as 11 days or after complete reepithelialisation, as late as 9 weeks post burn ; these findings corresponds with the studies accomplished by many authors<sup>(8,9)</sup>.