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Arabic Summary	

5- Summary and conclusion

In this work, a total of 400 samples collected from various human pathological lesions were bacteriologically examined to isolate and identify *S. aureus* 105 out of 400 were *S. aureus* was isolated in higher incidence from septic wounds (61%), then from nasal discharges, prostatic discharges, urine samples with an incidence of 16%, 15% and 13% respectively.

The characteristics of *S. aureus* isolates were studied in details. All of the strains isolated, produced catalase, coagulase and telluride reductase, fermented mannitol, and produced acetoin. This findings provide further evidence that such characteristics are the valuable tests of staphylococci pathogenicity in man.

The haemolytic activity of *S. aureus* strains on different types of R.B.Cs. was discussed. The results revealed that, the 5% sheep blood agar was the best to detect the haemolytic activity of the tested isolates (83.8% of the *S. aureus* strains were haemolytic on sheep blood agar).

Staphylococcal protein A (SpA) was found in 94.3% of the strains, and 99% produced lysozyme, 94.3% produced fibrinolysin, 98.1% produced DNase, 96.2% produced gelatinase, 93.3% produced protease and 88.6% of the strains produced lethicinase and lipase.

The *in vitro* activity of 13 different antibiotics against the *S. aureus* strains were evaluated .

Methicillin, gentamycin and tarivid were the most effective antibiotics against *S. aureus*. strains isolated. While the incidence of cefamanadole resistant *S. aureus*. (CRSA) was the highest (57.1%) followed by piperacillin resistant *S. aureus*. (PRSA) which was 51.4%.

It was found that, the pigment production by *S. aureus*. strains isolated was not sufficient to identify *S. aureus*. whereas 53.3% of *S. aureus* the strains tested produced golden yellow pigment, while 30.5% and 16.2% of these strains produced creamy and white pigment respectively.

In this study staphylococcal protein A (SpA) could be extracted from *S. aureus* Cowan 1 strain, and used in some serological tests showing clear and accurate agglutinations as in the following:

- The *S. aureus* enterotoxins classification.
- Detection of HCG hormone.

This work was done by coating SpA with specific antibodies, these applications showed the advantage of SpA uses as time, money and accurate wises.