Summary

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Staph. aureus is the most common cause of superficial and deep pyogenic infections . So , rapid and reliable differentiation of it from other strains is important in the clinical laboratories , as about 20-30% of the population acts as staphylococcal carriers .

Coagulase production has been accepted as the primary criterion for differentiating pathogenic Staph. aureus from commensal strains . Staphylocoagulases occur in two forms, bound form(clumping factor) which is detected by slide method & free form (extracellular coagulase) which is tested by tube method .

The slide method is useful in routine screening purposes but it may give false negative reactions . Bound coagulase cannot be determined on strains that spontaneously agglutinate .

The coagulase tube test was previously accepted for identification of Staph. aureus . However, false results due to non specific reactions , variability in plasma samples , and difficulties in evaluating the test as regards the degree of clotting of plasma led to criticism

other than coagulase test . But , variable results have been reported .

To overcome these difficulties and to find a rapid and reliable method for Staph. aureus identification , Essers & Radebold, (1980) described a new method using latex particles coated with human plasma to detect protein A which is one of cell wall constituents of all Staph. aureus strains .

The present study was undertaken to evaluate the efficacy of the latex agglutination test in identification of Staph. aureus . The results obtained by latex test were compared to that of coagulase , DNase , mannitol fermentation tests .

This work included 40 staphylococcal cultures isolated by sterile cotton swabs from infected abscesses , septic wounds , septic burns and discharging otitis media . Each specimen was subjected to :

1- Direct film stained with Gram stain .

2- Isolation on nutrient , sheep blood and mannitol salt agar plates .

The isolate which proved to be staphylococcus was further processed to :

1- Coagulase test by both slide and tube method .

2- DNase test .

3- Mannitol fermentation test .

The results showed that , no difference was seen between the results of the latex agglutination test and the tube coagulase test .

The latex agglutination test is very rapid (allowing identification of Staph. aureus in less than one minute) and reliable (as all coagulase +ve strains are latex +ve while coagulase -ve are latex -ve) method of low cost and has to be recommended for identification of Staph. aureus in bacteriological routine laboratories .