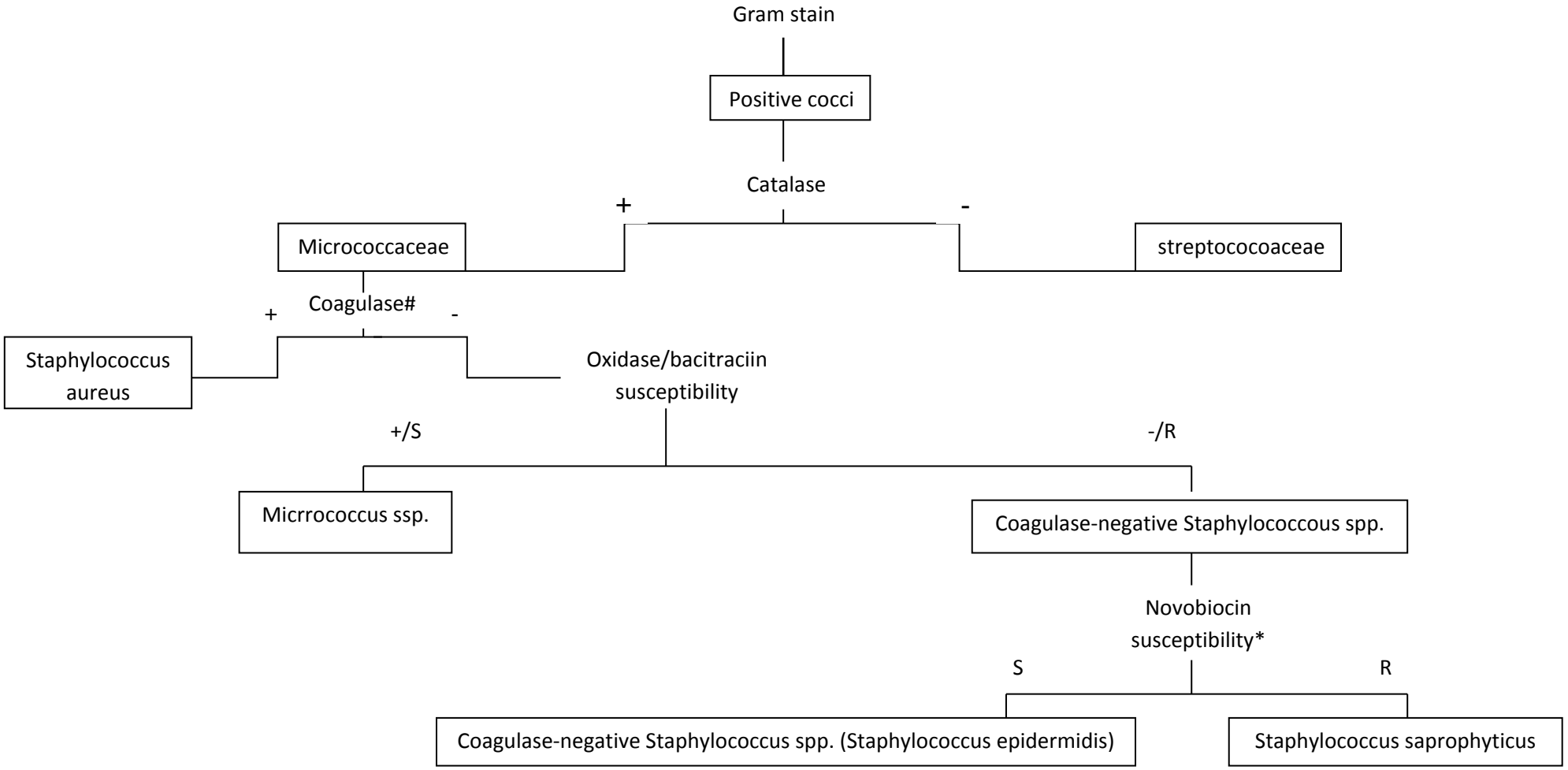
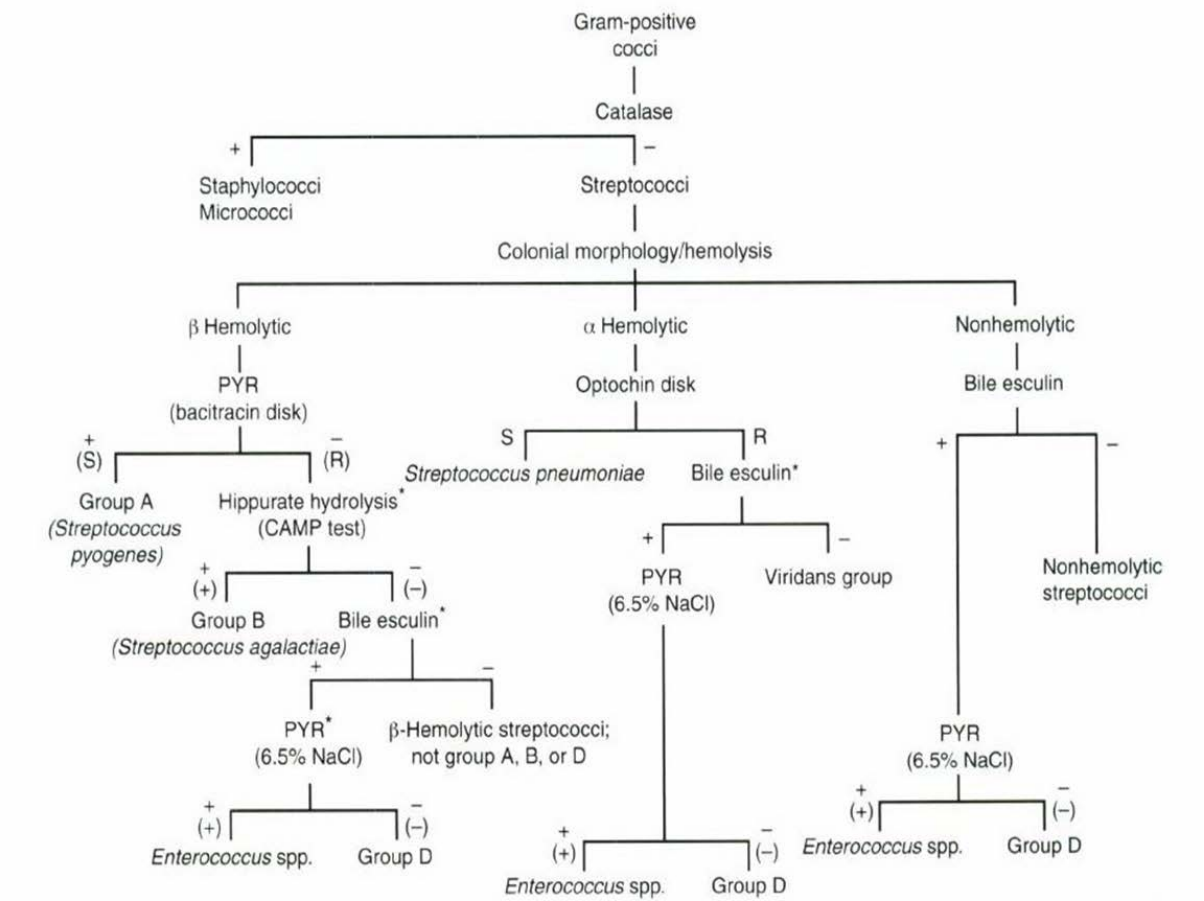
چارت شناسائی گونه های استافیلوکوک



#علاوه برS.aureus، S.lugdunensis، S.intermedius، S.schleferi و S.tryicus نیز کواگولاز مثبت میباشند.

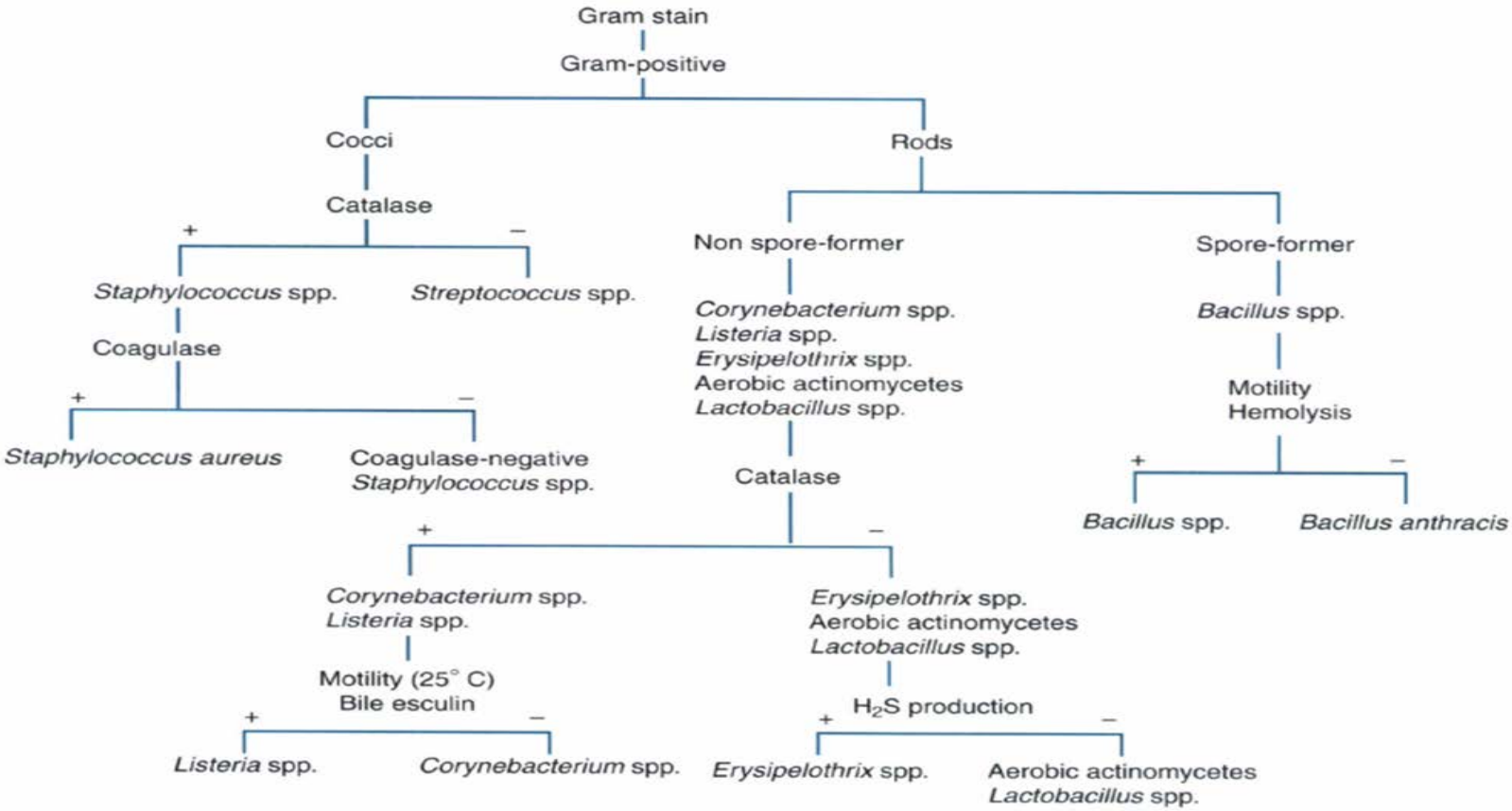
*Novobiocin susceptibility→S:16mm≤

چارت شناسائی کوکسی های گرم مثبت کاتالاز منفی

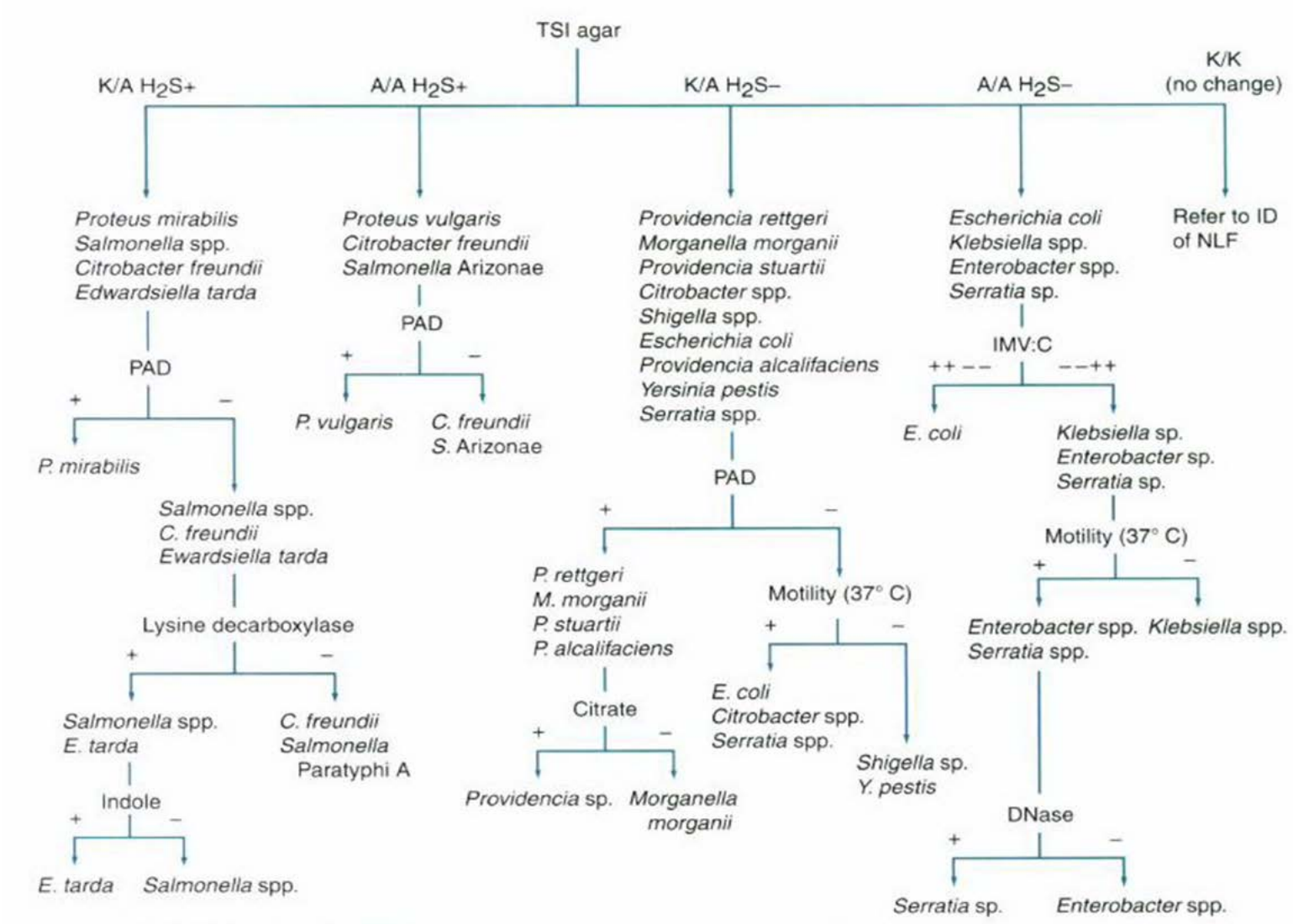


*Optochin disk ≥14mm:S <9mm:R 9-13mm:Do Bile esculin

چارت شناسائی باسیل های گرم مثبت



چارت تشخیص احتمالی انتروباکتریاسه ها در برخورد با آگار



TSI

- شناسائی گونه های انتروباکتریاسه با توجه به واکنش آنها در محیطهای TSI و LIA

A, Acid
@, acid and gas production
H_2S, hydrogen sulfide
K, alkaline
LIA. Lysine iron agar
NC. no change
TSI. triple sugar iron agar

TSI Reactions‡	LIA Reactions‡	Possible Identification
K/Ⓐ *or* K/A H_2S +	K/K *or* K/NC H_2S +	*Salmonella* spp. *Edwardsiella* spp.
K/A H_2S+	K/K *or* K/NC H_2S +	*Salmonella* spp. (rare)
K/Ⓐ	K/K *or* K/NC	*Salmonella* spp. (rare)
K/A	K/K *or* K/NC H_2S +	*Salmonella typhi* (rare)
K/Ⓐ	K/K *or* K/NC	*Salmonella* spp. (rare)
K/Ⓐ	K/A H_2S +	*Salmonella paratyphi* A (usually H_2S–)
K/Ⓐ	K/A *or* A/A	*Escherichia coli* *Salmonella paratyphi A* *Shigella flexneri* 6 (uncommon) *Aeromonas* spp. (oxidase-positive)
K/A	K/K *or* K/NC	*Plesiomonas* sp. (oxidase-positive) *Salmonella typhi* (rare) *Vibrio* spp. (oxidase-positive)
K/A	K/A *or* A/A	*Escherichia coli* *Shigella* groups A-D *Yersinia* spp.
A/Ⓐ H_2S +	K/K *or* K/NC H_2S +	*Salmonella* spp. (rare)
A/Ⓐ	K/A *or* A/A	*Escherichia coli* (rare)
A/A	K/A *or* A/A	*Escherichia coli* *Yersinia* spp. *Aeromonas* spp. (oxidase-positive) *Vibrio cholerae* (rare, oxidase-positive)
A/A	K/K *or* K/NC	*Vibrio* spp. (oxidase-positive)

مشخصات بیوشیمیائی گونه های انتروباکتریاسه

Tests or Substrate	Escherichieae	Edwardsielleae	Citrobacteriaceae	Salmonelleae*	Klebsielleae	Proteeae†	Yersinieae
Hydrogen sulfide (TSI agar)	–	+	+ or –	+	–	+ or –	–
Urease	–	–	(+") or –	–	– or (+)	+ or –	+
Indole	+ or –	+	– or +	–	–	+ or –	+ or –
Methyl red	+	+	+	+	–	+	+
Voges-Proskauer	–	–	–	–	+	–	–
Citrate (Simmons)	–	–	+	+	+	d	–
KCN	–	–	+ or –	–	+	+	–
Phenylalanine deaminase	–	–	–	–	–	+	–
Mucate	d	–		d	+ or –	–	
Mannitol	+ or –	–	+	+	+	– or +	+

Modified from Ewing WH: *Edwards and Ewing's identification of Enterobacteriaceae*, ed 4, East Norwalk, Conn, 1986, Appleton & Lange.

+, ≥90% positive within 1 or 2 days; (+), positive reaction after 3 or more days (decarboxylase tests: 3 or 4 days); –, ≥90% no reaction in 30 days; + *or* –, most cultures positive, some strains negative; – *or* +, most strains negative, some cultures positive; *d*, different reactions, +, (+), –; +", weakly positive reaction *TSI*, triple sugar iron; *KCN*, potassium cyanide.

Salmonella serovar Typhi and Paratyhpi and some rare serovars fail to use citrate in Simmons medium. Cultures of serovar Paratyhpi and some rare serotypes may fail to produce hydrogen sulfide; an occasional strain of almost serotype of *Salmonella* genus may be hydrogen sulfide negative.

†Some cultures of *Proteus mirabilis* may yield positive Voges-Proskauer tests.