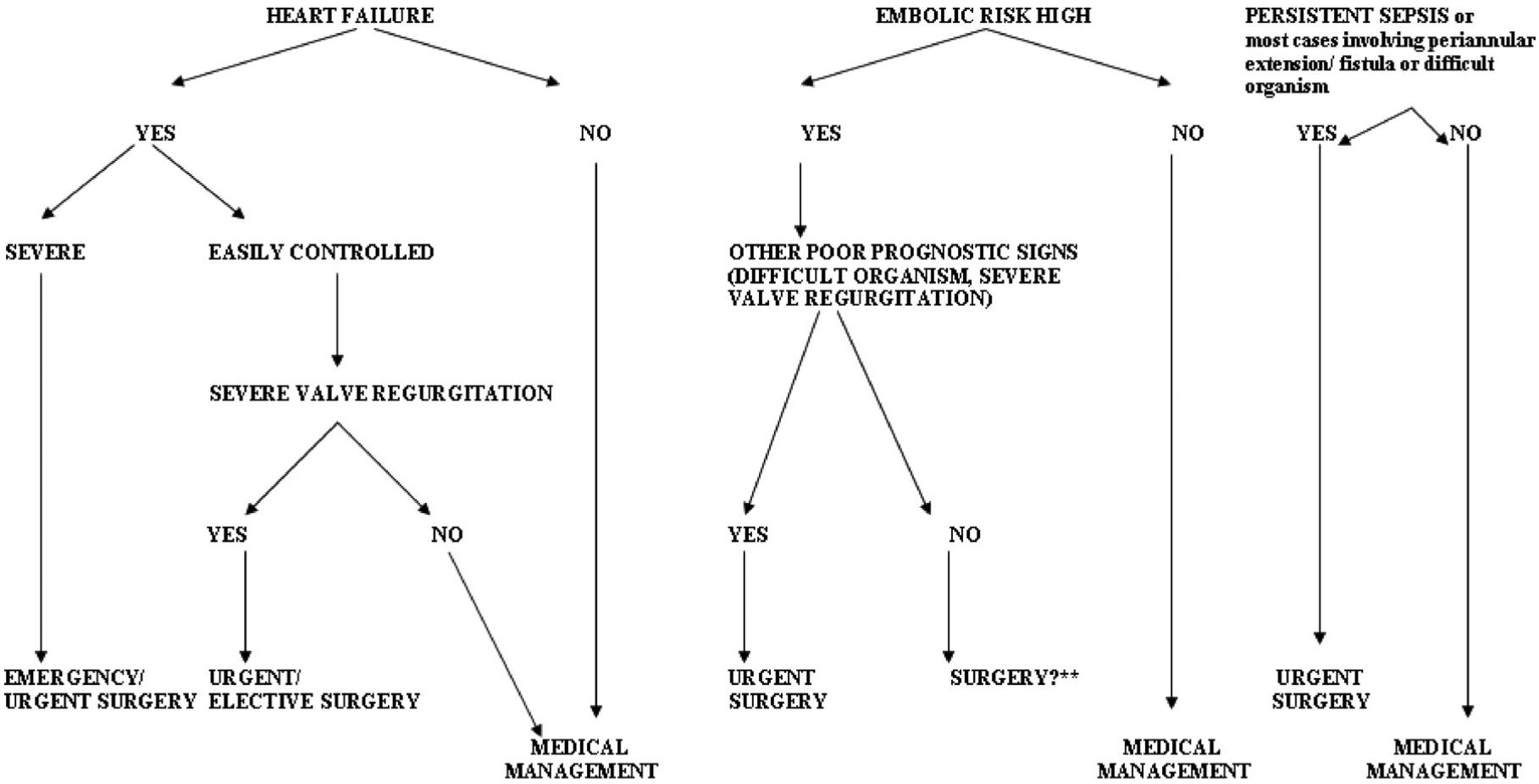
Surgical indications in native valve Infective Endocarditis



** Surgery considered if previous embolism and persistent vegetations. Surgery can also be considered if isolated very large vegetations (>15mm) are present, especially if conservative surgery is feasible.

Bernard D. Prendergast, and Pilar Tornos Circulation. 2010;121:1141-1152

American Heart Association.

Table 2. Indications for Surgery in IE

Congestive heart failure*

Congestive heart failure caused by severe aortic or mitral regurgitation or, more rarely, by valve obstruction caused by vegetations

Severe acute aortic or mitral regurgitation with echocardiographic signs of elevated left ventricular end-diastolic pressure or significant pulmonary hypertension

Congestive heart failure as a result of prosthetic dehiscence or obstruction

Periannular extension

Most patients with **abscess** formation or fistulous tract formation

Systemic embolism†

Recurrent emboli despite appropriate antibiotic therapy

Large vegetations (>10 mm) after 1 or more clinical or silent embolic events after initiation of antibiotic therapy

Large vegetations and other predictors of a complicated course

Very large **vegetations (>15 mm**) without embolic complications, especially if valve-sparing surgery is likely (remains controversial)

Cerebrovascular complications‡

Silent neurological complication or transient ischemic attack and other surgical indications

Ischemic stroke and other surgical indications, provided that cerebral hemorrhage has been excluded and neurological complications are not severe (eg, coma)

Persistent sepsis

Fever or positive blood cultures persisting **for >5 to 7 days** despite an appropriate antibiotic regimen, assuming that vegetations or other lesions requiring surgery persist and that extracardiac sources of sepsis have been excluded

Relapsing IE, especially when caused by organisms other than sensitive streptococci or in patients with prosthetic valves

Difficult organisms

S aureus IE involving a prosthetic valve and most cases involving a left-sided native valve

IE caused by other aggressive organisms (*Brucella, Staphylococcus lugdunensis*)

IE caused by multiresistant organisms (eg. methicillin-resistant *S aureus* or vancomycin-resistant enterococci) and rare infections caused by Gram-negative bacteria

Pseudomonas aeruginosa IE

Fungal IE

Q fever IE and other relative indications for intervention

Prosthetic valve endocarditis

Virtually all cases of early prosthetic valve endocarditis

Virtually all cases of prosthetic valve endocarditis caused by *S aureus*

Late prosthetic valve endocarditis with heart failure caused by prosthetic dehiscence or obstruction, or other indications for surgery

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ENDOCARDITIS

Duke Criteria

IMIG

MAJOR CRITERIA

Persistently +ve blood culture for typical organisms

ECHO: vegetation, dehiscence, abscess

New valvular regurgitation murmur

Coxiella burnetii infection

MINOR CRITERIA

Predisposing heart condition or IV drug use

Fever - 38.0°C

Vascular: emboli to organs / brain, hemorhages

Immunologic : glomerulonephritis, Osler's nodes, Roth spots, rheumatoid factor

Positive blood cultures that do not meet specific criteria

DEFINITE ENDOCARDITIS

2 major clinical criteria

1 major & any 3 minor clinical criteria

5 minor clinical criteria

Histological findings

+ve Gram stain or cultures from surgery or autopsy

POSSIBLE ENDOCARDITIS

1 major and >1 minor clinical criteria

3 minor clinical criteria

REJECTED ENDOCARDITIS

Resolution within <4 days of Abx

Alternate diagnosis is made

No evidence of IE found at surgery or autopsy (after antibiotic therapy for ≤4 days)

Definite or possible criteria not met