**Oral surgery**

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Prophylaxis antibiotic

University of Jordan

Faculty of Dentistry

4th year

In speak of antibiotic mean there is infection we need to reduce outcomes of it, but do we use these antibiotics with proper way?   
it's dynamic issue , especially when we talk about British or American school until now they continuously change their minds about " if there is risk of infection or not in using antibiotic " on the other hand there is risk of local or distant risk of infection that need to be prevented .  
  
- In order to prescribe prophylaxis antibiotic “principle of using prophylaxis antibiotic”

1- Risk of infection must be significant: any procedure in dentistry contain some sort of infection but many of them not significant .In surgery routine dental extraction up to 3 >> no need for prophylactic doses … minor oral surgery like extract more than 3 adjacent teeth or ossousous >> need prophylaxis … what about procedure with long period ??

2- correct narrow spectrum antibiotic must be chosen: because wide spectrum antibiotic lead to increase the resistance

3- Antibiotic level must be high; when you start your procedure antibiotic level must be high in pat’s blood. that why we ask the pt to take it before procedure half or at least one hour , more than one hour lead to increased risk of infection because it might be distribute or the resistance of antibiotic already begun

IV > 1/4 hour before the procedure   
oral > 1/2 hour before the procedure   
\* usually prophylactic doses double therapeutic doses \*   
4- Time antibiotic administration correctly:

For the antibiotic to be maximally effective in preventing postoperative infection the antibiotic must be given 2 hours or less before the surgery begins.  
5- Use shortest antibiotic exposure that is effective:

If the procedure is a short operation, a single preoperative dose is adequate.

- Factor related to postoperative infection:  
1- size of bacterial inoculum : for example when we do incision and derange for cellulites " best treatment is derange with cover of prophylactic antibiotic because of there are increase of bacterial load . also doing aggressive extraction of wisdom or surgical remove of cyst , we have to protect human body from spread of infection .

2- Duration of surgery: long duration of surgery > any procedure need more than 2 hour always we prescribe prophylaxis antibiotic

3- Presence of foreign body, implant or dead space   
4- state of host resistant

-Factor necessary for metastatic infection:

1- Distant susceptible site: as pt with any prosthetic device

2- Haematogenous bacterial seeding

3- Impaired local defence

Cardiac condition association with the highest risk of adverse outcome from endocarditis for which prophylaxis with dental procedures are recommended:

• Prosthetic cardiac valve or prosthetic material used in valve repair

• Previous endocarditis

• Congenital heart disease only in the following categories:

- Unrepaired cyanotic congenital heart disease, including those with palliative shunts and conduits

- Completely repaired congenital heart disease with prosthetic material or device, whether placed by surgery or catheter intervention, during the first six months after the procedure\*

- Repaired congenital heart disease with residual defects at the site or adjacent to the site of a prosthetic patch or prosthetic device (which inhibit endothelialisation)

• Cardiac transplantation recipients with cardiac valvular disease

\*Prophylaxis is reasonable because endothelialisations of prosthetic material occurs within six months after the procedure

# These are the only condition that required prophylaxis according to American schools

#NICE said: “no need to give prophylaxis to any pt with distant risk of infection”

متفين ع قصة ال local infection بس الاختلاف ع distant infection

السؤال احنا مع مين نمشي ؟ حسب البلد والقوانين الموجوده فيها مع بعض العوامل زي استشارة الطبيب الخاص للمريض

Condition placing patient at risk for prosthetic joint infection:

1- Prosthetic joint place within 1st 2 year

2- pt with rheumatoid arthritis

3-History of prosthetic joint infection

4- Congenital or acquired immunosuppression disease

5- Malnutrition

6- Systemic lobusebethemimatous\* (not sure)

7- Haemophilia

8- Diabetes

Any pt have one or more of these, he must take prophylaxis before any procedure that contain bleeding, manipulation of gingiva or periapical surgery \* conservative procedure doesn't need

# Dental treatment for diabetic patients has a local risk of infection based on finger stick blood glucose testing:

|  |  |
| --- | --- |
| Finger-stick results of blood glucose/mg (%) | Treatment |
| Less than 85 | Administrate glucose and postpone any elective treatment |
| 85-200 | Stress reduction , with a prophylactic antibiotic for extraction. |
| 200-300 | Stress reduction, a prophylactic antibiotic, and referral to a primary care physician. |
| 300-400 | Avoid elective treatments, referral to a primary care physician, send to a nearby ER room (in a hospital). |
| >400 | Avoid elective treatment, send to a nearby ER room (in a hospital). |

\*A dental procedure in which prophylaxis is not recommended:

1. Restorative dentistry
2. Routine LA injection
3. Suture removal
4. Making impression
5. Taking of oral radiographs
6. Shedding of primary teeth
7. Intracanal endodontic therapy and placement of rubber dams
8. Orthodontic appliance adjustment

\*\*\*\*\*\*Please you must refer to the book Ch 16 p(312-317)