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## Background

Male  
6 years old  
26.3 kg

Open phalangeal fracture  
↳ Methicillin-sensitive *Staphylococcus aureus* (SAMS) osteomyelitis

Treatment in line with recommendations : [1]

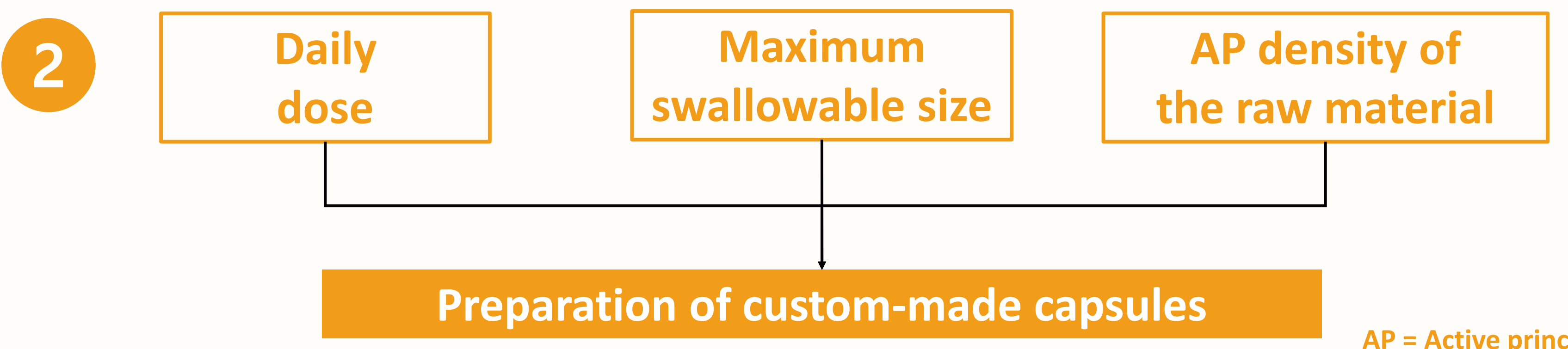
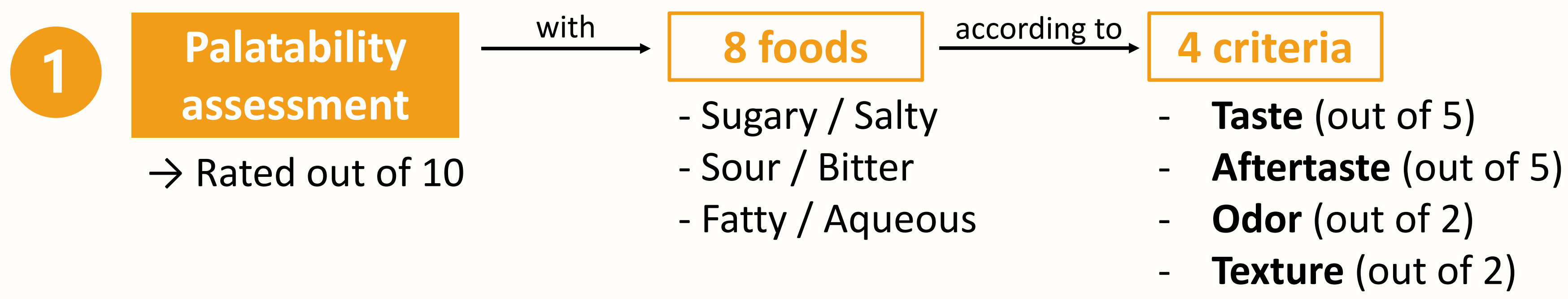
- J0 • Cloxacillin (intravenous route)
- J5 • Relay : Cotrimoxazole + Rifampicin (oral route)
- J15 • Cutaneous toxicity + Neutropenia (cotrimoxazole-induced)
  - ↳ Clindamycin 1050 mg/d (40mg/kg/d) for 1.5 months (oral route)
  - ↳ Inappropriate capsule size and poor palatability [2,3]

## Objectives

Clindamycin treatment adherence and efficacy :

- 1 Improve Clindamycin palatability.
  - ↳ If insufficient : 2 Prepare custom-made capsules.

## Material & Methods



## Results

1 The best masking results were obtained following this protocole : Clindamycin diluted in chocolate cream dessert and white chocolate taken before and after to line the mouth.

Food type	Applesauce	Chestnut cream	Chocolate cream	White chocolate	Chocolate + Yogurt	Plain yogurt	Cottage cheese	Cream cheese
Taste /5	1.0	0.5	2.0	3.0	2.0	0.0	0.0	0.0
Aftertaste /5	1.3	1.0	2.0	1.0	0.7	1.0	1.0	0.0
Odor /2	1.7	1.5	2.0	2.0	2.0	2.0	2.0	2.0
Texture /2	1.7	1.5	2.0	2.0	2.0	2.0	2.0	1.0
Palatability /10	4.7	3.8	6.7	6.7	5.6	4.2	4.2	2.5

Table 1. Clindamycin palatability study on 3 persons.

2 Posology : 1050 mg/d divided in 2 doses } Size 4 capsules made from the 150mg Generic  
Capsules : Size 4 maximum for this patient } → 5 capsules of 105 mg morning and evening

Raw material AP Density	Capsule size							
	5	4	3	2	1	0	00	000
Original 75mg 250 mg/mL	32.5	52.5	75	92.5	125	170	227.5	342.5
Original 150mg 300 mg/mL	39	63	90	111	150	204	273	411
Original 300mg 441,2 mg/mL	57.4	92.6	132.4	163.2	220.6	300.0	401.5	604.4
Generic 150mg 500 mg/mL	65	105	150	185	250	340	455	685
Generic 300mg 600 mg/mL	78	126	180	222	300	408	546	822

Table 2. Clindamycin quantity contained in one capsule depending on the commercial form used as raw material and the capsule size chosen for the preparation.

## Discussion - Conclusion

Marketing Authorization treatments

Oversized capsules (size > 4)

Compassionate use treatments

Excessive volumes (33 mL)

Poor palatability

More concentrated drinkable form

Palatability improvement

Absence of stability data

Remained bad despite food masking

Custom-made capsules

What can we do for patients that are unable to swallow capsules?

Magistral preparations are of major interest to ensure treatment adherence.

## References

- [1] Groupe de Pathologie Infectieuse Pédiatrique (GPIP). Guide de prescription d'antibiotique en pédiatrie, Archives de Pédiatrie, 2016;23(3):1-55.
- [2] Gee SC, Hagemann TM. Palatability of liquid anti-infectives: clinician and student perceptions and practice outcomes. J Pediatr Pharmacol Ther. 2007;12(4):216-223. doi:10.5863/1551-6776-12.4.216
- [3] Truong S, Tang EKY, Khan RN, et al. Prior administration of chocolate improves the palatability of bitter drugs: The Choc-with-Med study. J Paediatr Child Health. 2021;57(8):1267-1273. doi:10.1111/jpc.15448