

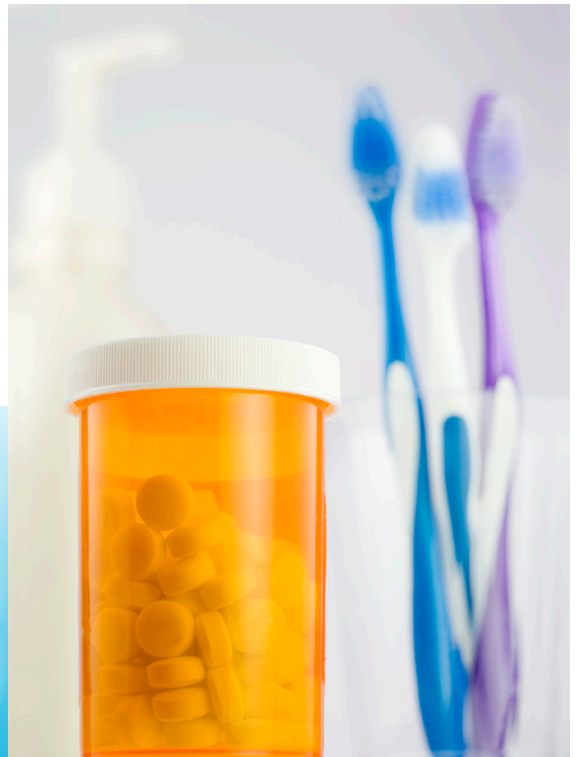
Protocols in *Dental Conditions*



Recurrent Aphthous Ulcers

Dental Abscess

Xerostomia





RELIEVES
PAIN



REPAIRS



PREVENTS

OBJECTIVE **Aptae**



SUNSTAR



Aftamed®

www.sunstargum.com



Protocols in *Dental Conditions*

Daniela Attard

*Every tooth in a man's head is more valuable
than a diamond.*

(Miguel de Cervantes, Don Quixote, 1605)

This booklet was compiled by Daniela Attard as part of an undergraduate project carried out for the partial fulfillment of the requirements of the course leading to the Degree of Bachelor of Pharmacy (Honours).

This study was carried out under the supervision of Professor Lilian M. Azzopardi, Head of Department, Department of Pharmacy, University of Malta.

The material has been reviewed by a panel of experts, namely:

- George E. Camilleri B.Ch.D., H.D.D., F.D.S.
- Georgeann Meilak B.Pharm. (Hons)
- Alan Miller B.Pharm
- Jacqueline Padovani M.D., DipWH., MMCFD
- David Tanti M.D., MMCFD
- Raymond W. Zammit B.Ch.D.

Sponsored by: GlaxoSmithKline Consumer Healthcare, Sunstargum, Chemimart Group, Pro-Health Ltd. as sole distributors for Laboratorios KIN, E.J. Busuttill Ltd., Sanofi-Aventis Ltd., PHADISCO, Les Laboratoires Servier.

Cover by: Stephen Formosa

Printed by: Print Right Ltd.

The author makes no representation, expressed or implied, with regard to the accuracy of the information contained in the booklet and cannot accept any legal responsibility or liability for any errors or omissions that may be made.

Daniela Attard
Department of Pharmacy
Faculty of Medicine and Surgery
University of Malta
Msida, Malta

Published in August 2011

Preface

Patients consult pharmacists with complaints of dental pain and oral lesions. While some presentations may reflect minor aetiologies there are instances where referral to a dentist is necessary for further assessment and specific management. Pharmacists require the necessary skills to be able to identify cases where referral is essential and should be cognizant of common oral lesions and the medications and advice necessary for the management of minor conditions that do not require referral.

Common oral lesions and conditions include recurrent aphthous ulcers, xerostomia and dental abscess. Aphthous ulcers are common recurrent lesions whilst xerostomia is an inconvenient condition which can be due to medications. In dental abscesses pharmacists may help in identifying the condition and in providing support until the patient contacts a dentist.

These three conditions have been identified for the development of protocols to be followed by pharmacists when responding to complaints related to dental conditions. Daniela Attard has prepared the protocols as part of her project leading to a degree in pharmacy. These protocols form part of a series of protocols that are being developed by the Department of Pharmacy at the University of Malta as part of a research project in the area of evidence-based pharmacist interventions.

Professor Lilian M. Azzopardi
Head, Department of Pharmacy

Contents

Section 1: Introduction

Abbreviations 10

Glossary 10

Interpretation of shapes 11

Section 2: Treatment protocols

Introductory protocol common to all three conditions 14

Recurrent Aphthous ulcers protocol 16

Xerostomia protocol 21

Dental abscess protocol 26

Section 3: Appendix

Main predisposing factors of Recurrent Aphthous Ulcers 30

Table 1 PoMs used for severe Recurrent Aphthous Ulcers 30

Management for Major Aphthous Ulcers 31

Management for Herpetiform Ulcers 31

Table 2 Non-steroidal anti-inflammatory drugs 31

Table 3 Systemic Corticosteroids 32

Table 4 Drugs that may cause dry mouth 33

Table 5 Anticholinergic effects of antipsychotics (phenothiazines) 34

Table 6 Anticholinergic effects of antipsychotics (others) 34

Table 7 Anticholinergic effects of antidepressants 34

Oral hygiene 35

Section 4: References

References 37

How to use this booklet

This booklet contains a set of three treatment protocols for dental conditions, which are designed to guide the pharmacist through important steps to follow when responding to the patient and providing appropriate advice. These protocols should be considered as guidelines and are not intended to replace the pharmacist's clinical judgement.

- Any difficulties with understanding abbreviations or medical terms should be tackled by referring to **Section 1** (pages 10-11). Also, this section includes the interpretation of shapes used for the construction of the flowcharts.
- **Section 2** (page 14) contains the three treatment protocols initiating from step 1. Step 2 divides those patients that present to the pharmacy with a prescription from those without. For patients presenting with a prescription, you should go to step 9. Step 3 should be followed for patients without a prescription. Then, you should either choose step 6, step 7 or step 8 according to the presenting condition. The respective protocol should be followed until dispensing of a medication is carried out or the patient is referred to a general practitioner or dentist.
- For further details, refer to the explanatory text presented separately, and to **Section 3** (page 30).
- **Section 4** (page 37) contains the references that were used to compile the content of the booklet.

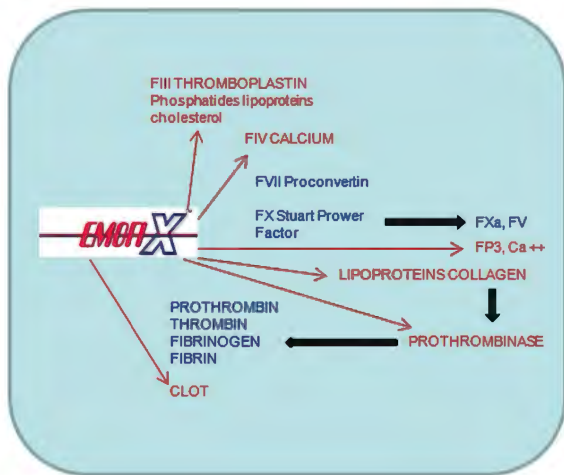


EMOFIX[®]

Haemostatic Barrier Ointment 30 g e

A barrier ointment which physiologically supports the natural extrinsic coagulation pathway, by topically supplying pro-coagulation factors:

Saturated Fatty Acids
Collagen
Phospholipids
Calcium
Potassium
Magnesium



Indications:

Medical Device with a mechanical action used for the prevention of re-bleeding in some cutaneous mucosal hemorrhagic conditions like traumatic or essential epistaxis, gingival-bleeding etc.

Administration:

Apply a sufficient quantity of the product to the affected area, when necessary. In case of nasal use, it is recommended that the product be administered using a suitable device.

Adverse reactions:

No known adverse reactions have been reported.

Composition:

Saturated fatty acids, yeast protein extract (vegetal collagen), phosphatidylcholine, tocopheryl acetate, beeswax, soy oil, stearyl alcohol, calcium, potassium, magnesium chlorides, glyceryl monostearate, methyl and propyl p-hydroxybenzoate, BHT.

Cautions:

Store between 18° - 25°C. At low temperatures the product can appear compact, which does not compromise the product's performance; it may be brought back to the original state by simply maintaining it at room temperature (not less than 18° C).

Do not use in case of known hypersensitivity to any of the constituents of product.

In case of adverse reactions stop treatment and consult a doctor.

Close the tube tightly after use.

Never use the product after the expiry date.

Keep it out of the reach of children.



Section 1
INTRODUCTION



Abbreviations

DM: Diabetes Mellitus	o.d.: every day
HIV: Human Immunodeficiency Virus	b.d.: twice daily
HU: Herpetiform Ulcers	t.d.s.: to be taken three times daily
MjAU: Major Aphthous Ulcers	q.d.s.: to be taken four times daily
NSAIDs: Non-Steroidal Anti-Inflammatory Drugs	mcg: micrograms mg: milligrams
OTC: Over-the-Counter	g: grams
PoMs: Prescription only Medicine	kg: kilograms
RAU: Recurrent Aphthous Ulcers	

Glossary (based on Mosby's Medical, Nursing & Allied Health Dictionary, 6th edn. St Louis: Mosby; 2002)

Coeliac disease: a small bowel condition caused by a sensitivity to gluten.

Crohn's disease: a chronic, idiopathic inflammatory bowel disease.

Cushing's Syndrome: pituitary adenoma or hyperplasia with hypersecretion of ACTH/corticotrophin resulting in adrenal cortical overactivity.

Dental abscess: infection of the mouth, face, jaw or throat with local collection of pus.


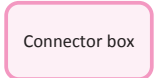
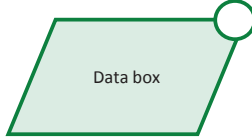
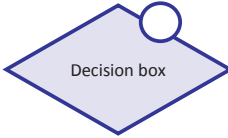
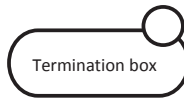
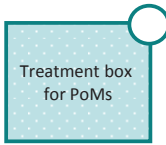
Recurrent Aphthous Ulcers: inflammation of the mucosa of the mouth with painful ulceration.

Ulcerative colitis: a chronic, episodic inflammatory bowel disease.

Xerostomia: dryness of the mouth.



Interpretation of shapes

Shape	Interpretation
 <p>Action box & Treatment box</p>	<p>Action box: Indicates when an action is required to be carried out by the pharmacist</p> <p>Treatment box: Contains OTC treatment</p>
 <p>Connector box</p>	<p>Connects one box to another</p>
 <p>Data box</p>	<p>Represents known information about the patient</p>
 <p>Decision box</p>	<p>Poses yes-or-no questions to the pharmacist, thus leading to different paths</p>
 <p>Termination box</p>	<p>Indicates when it is time to exit the protocol</p>
 <p>Treatment box for PoMs</p>	<p>Contains treatments which are considered as PoMs</p>



Look great. Feel even better.

New **JOBST® UltraSheer**

An exceptional combination
of comfort, style and
gradient compression therapy.

Style

Six new fashionable colors let you mix and match
for every occasion

Comfort

Softly caresses your legs and keeps them cool

Sheerness

Outstanding sheerness for beautiful legs

Effective Therapy

Gradient compression for high medical efficacy



JOBST® UltraSheer
Gradient Compression Hosiery
Available in six fashionable colors
15-20mmHg, 20-30mmHg and 30-40mmHg*

* The mean compression for an average ankle size.

JOBST
Advanced
comfort

JOBST®

Comfort, Health and Style!

60219 R1 02009 BSN medical Inc. REV 04/09

E.J. Busuttill Ltd.

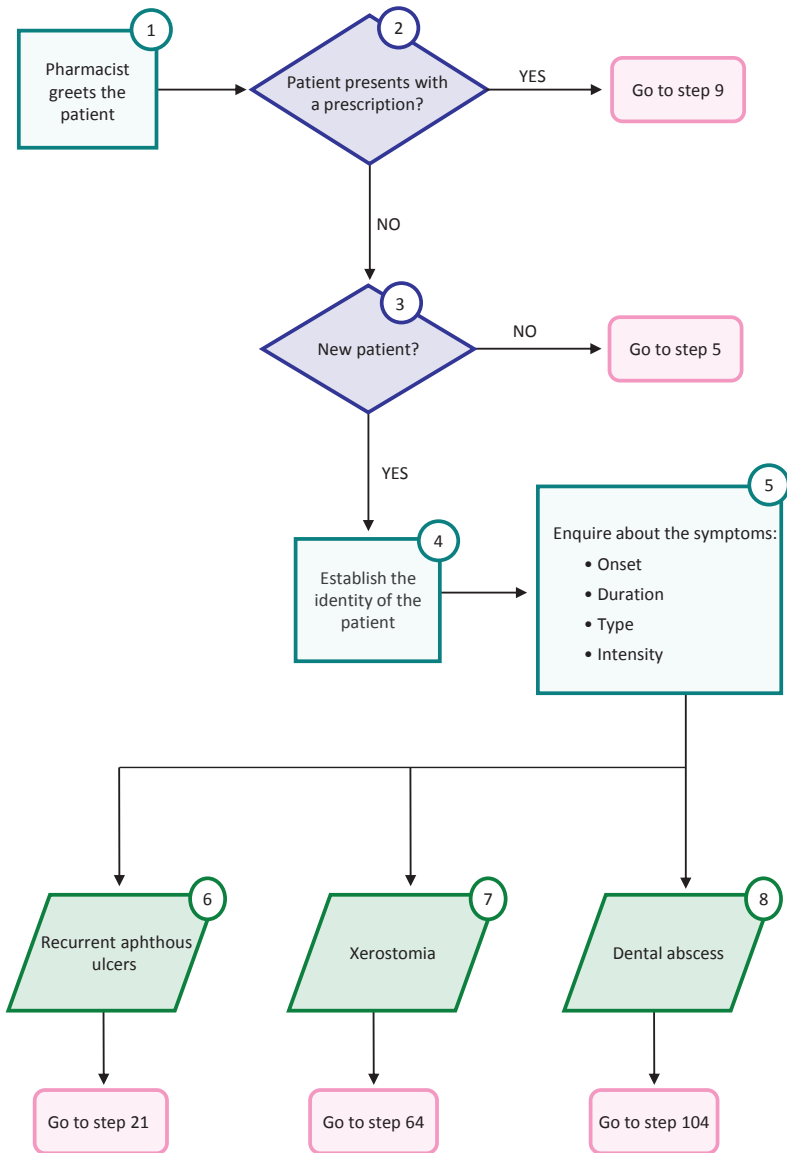
'Niche', Xorrox street, B'Kara, Malta

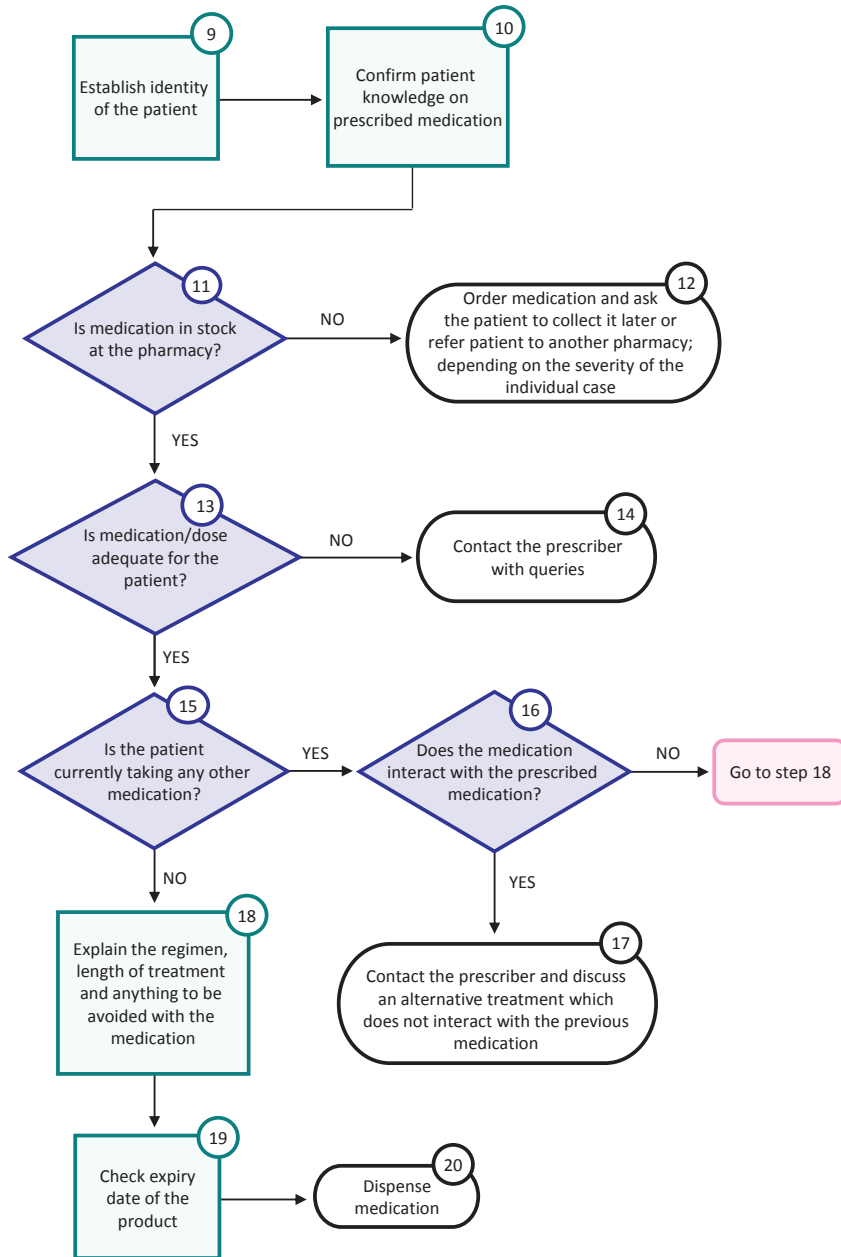
T: +356 21447184 • M: +356 99882437 • E: busuttillc@ejbusuttill.com • W: www.ejbusuttill.com

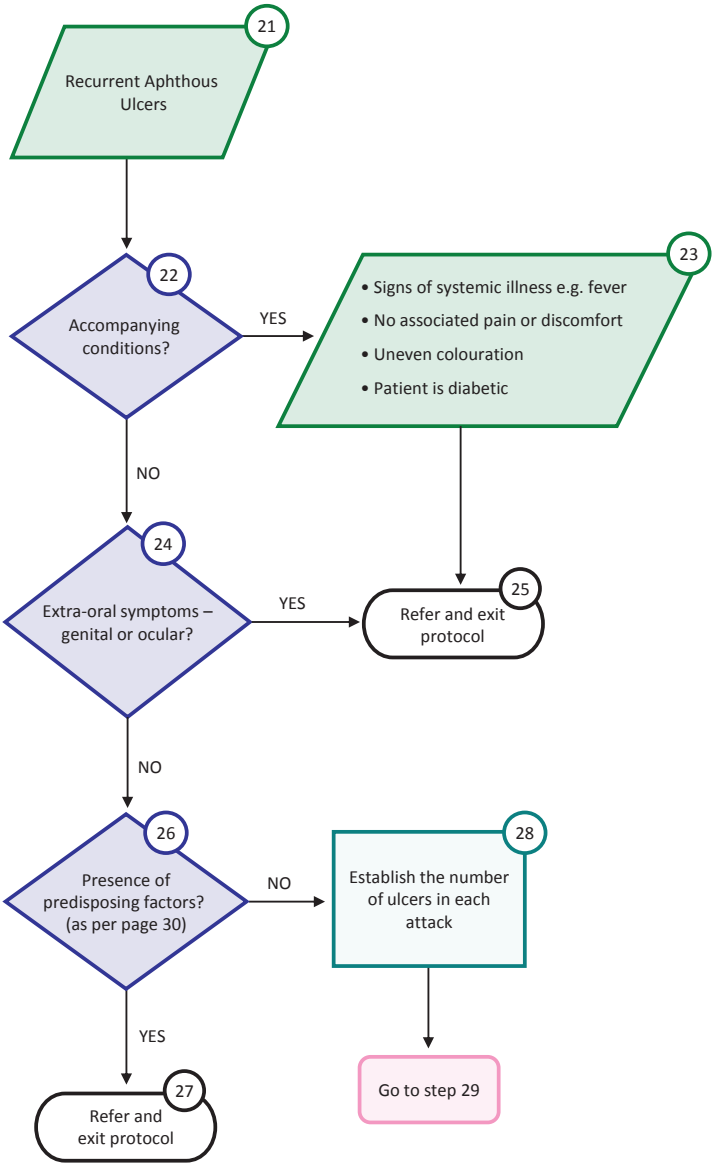


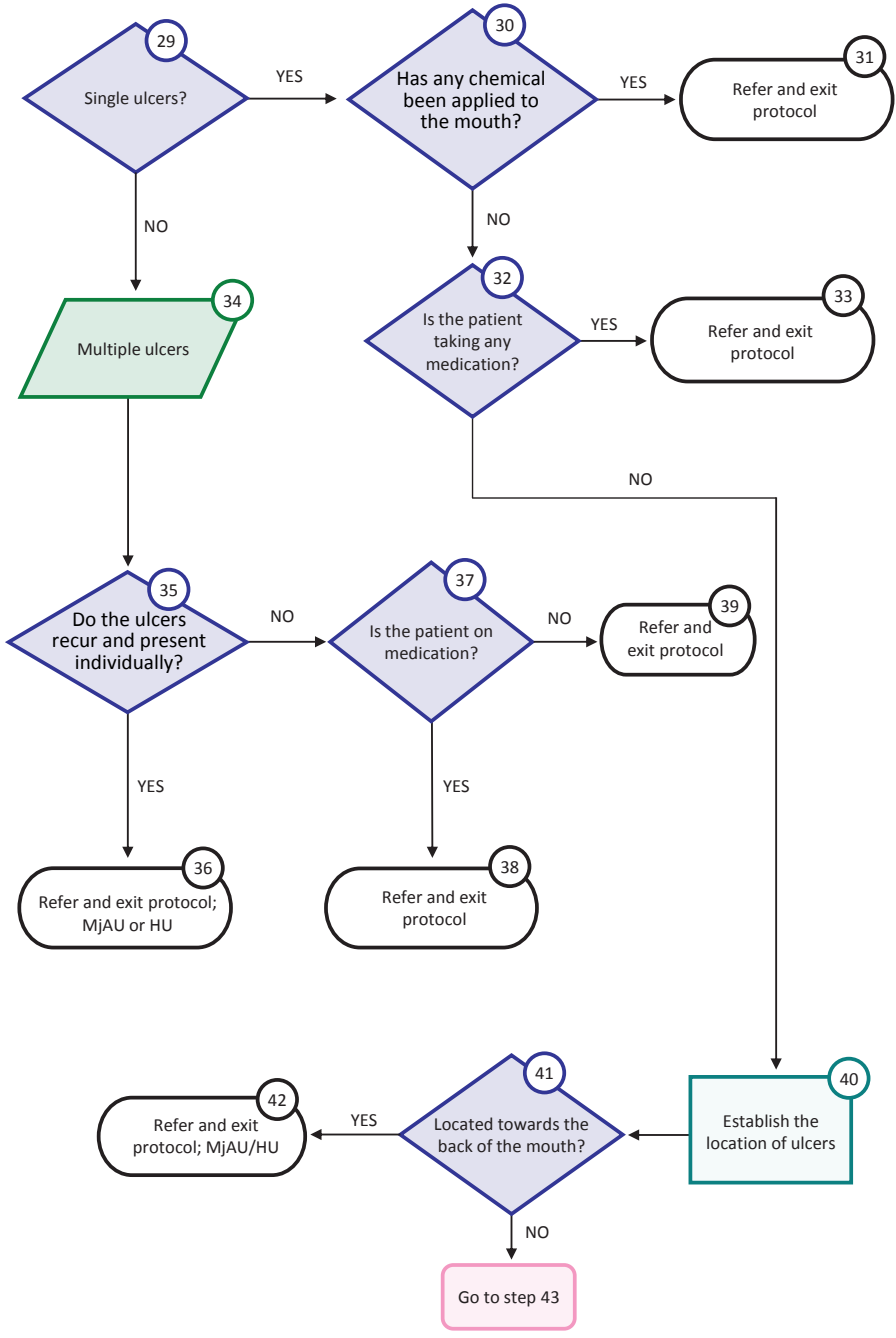
Section 2
TREATMENT PROTOCOLS

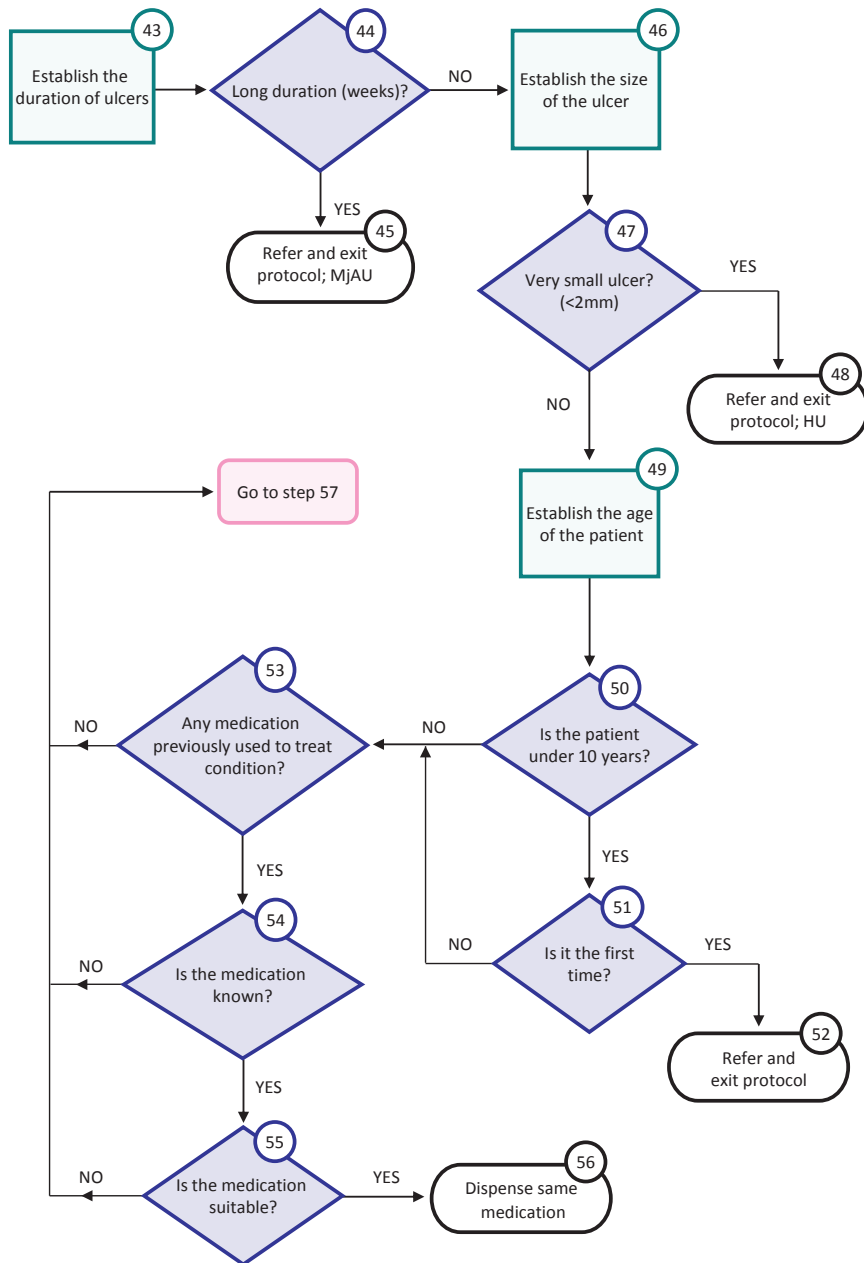


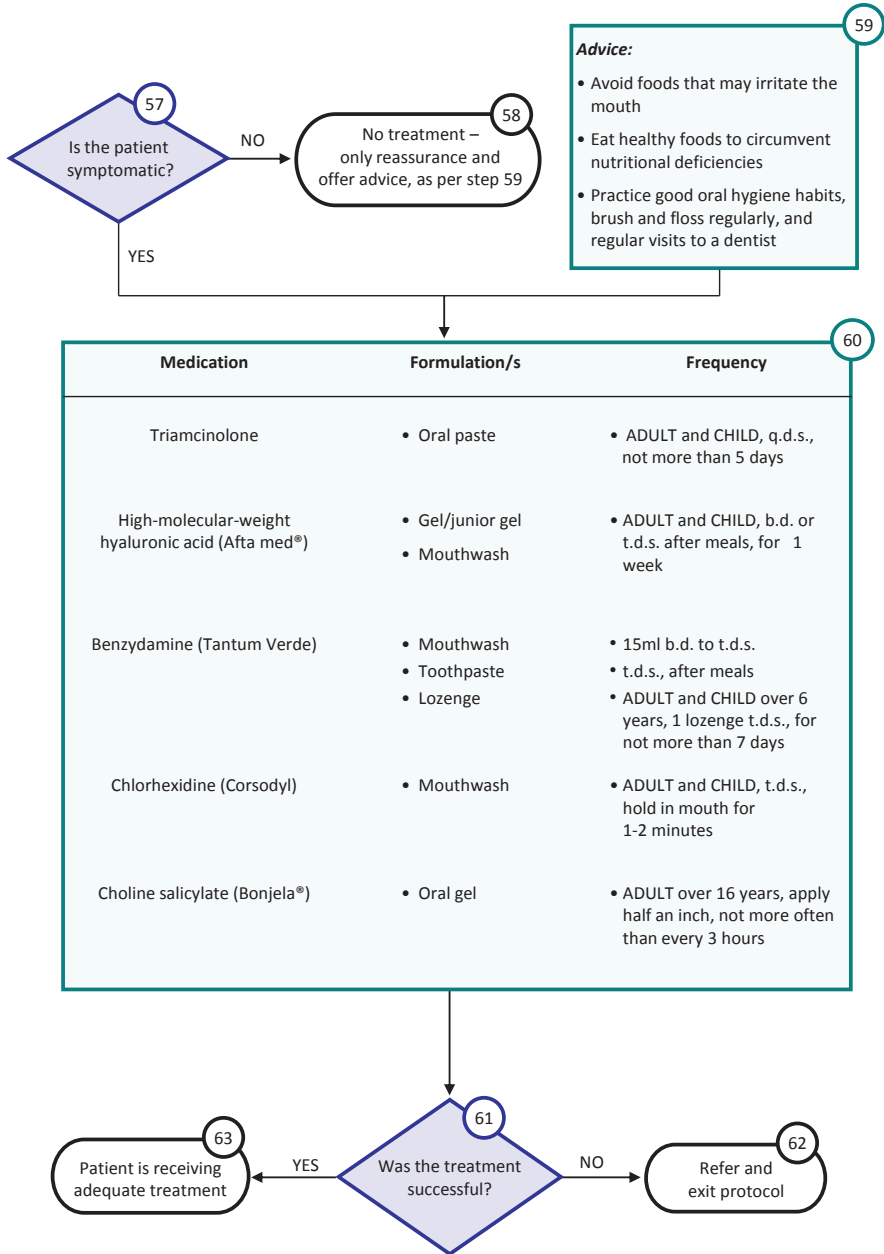












Rodogyl®



Spiramycin-Metronidazole

To Prevent and Treat The Oral Infections

RODOGYL, film-coated tablets

Spiramycin 0.75 MIU

Metronidazole 125.0 mg

Therapeutic indications

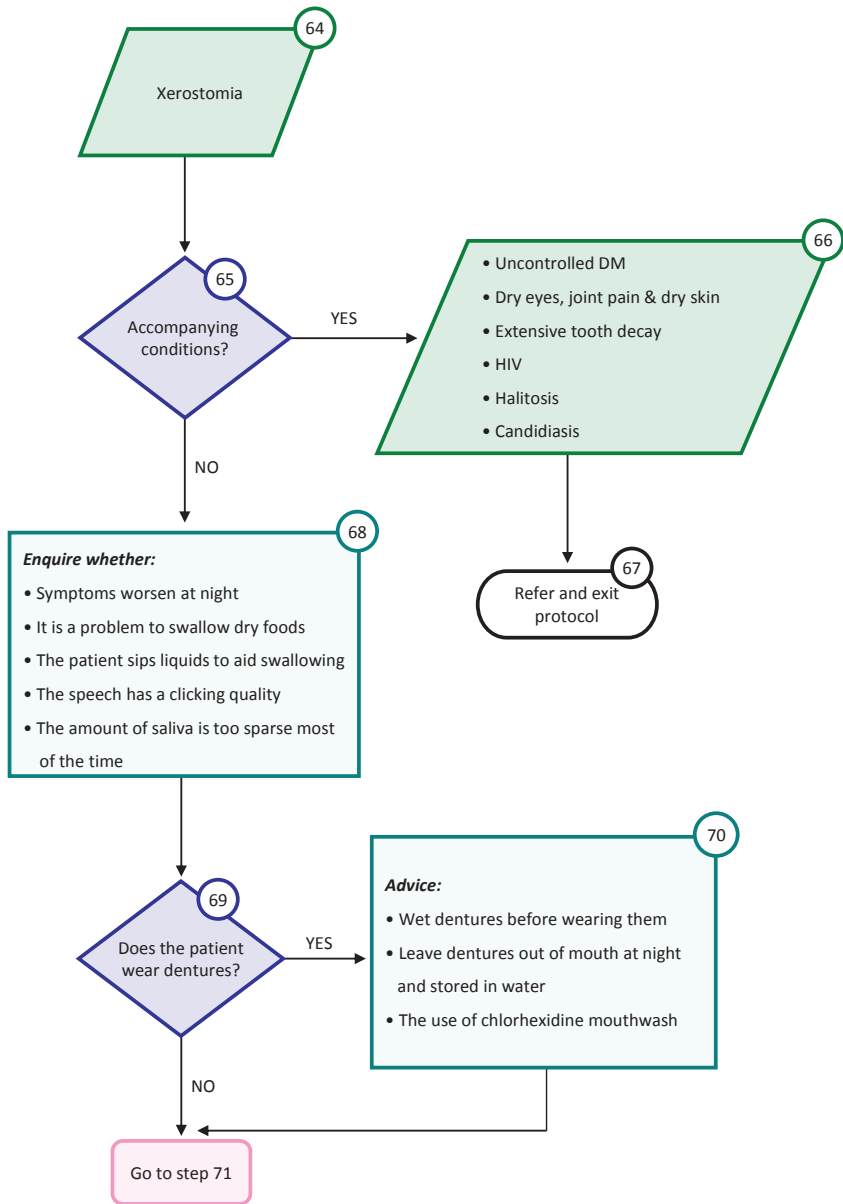
The indications are limited to acute, chronic or recurrent stomatological infections:

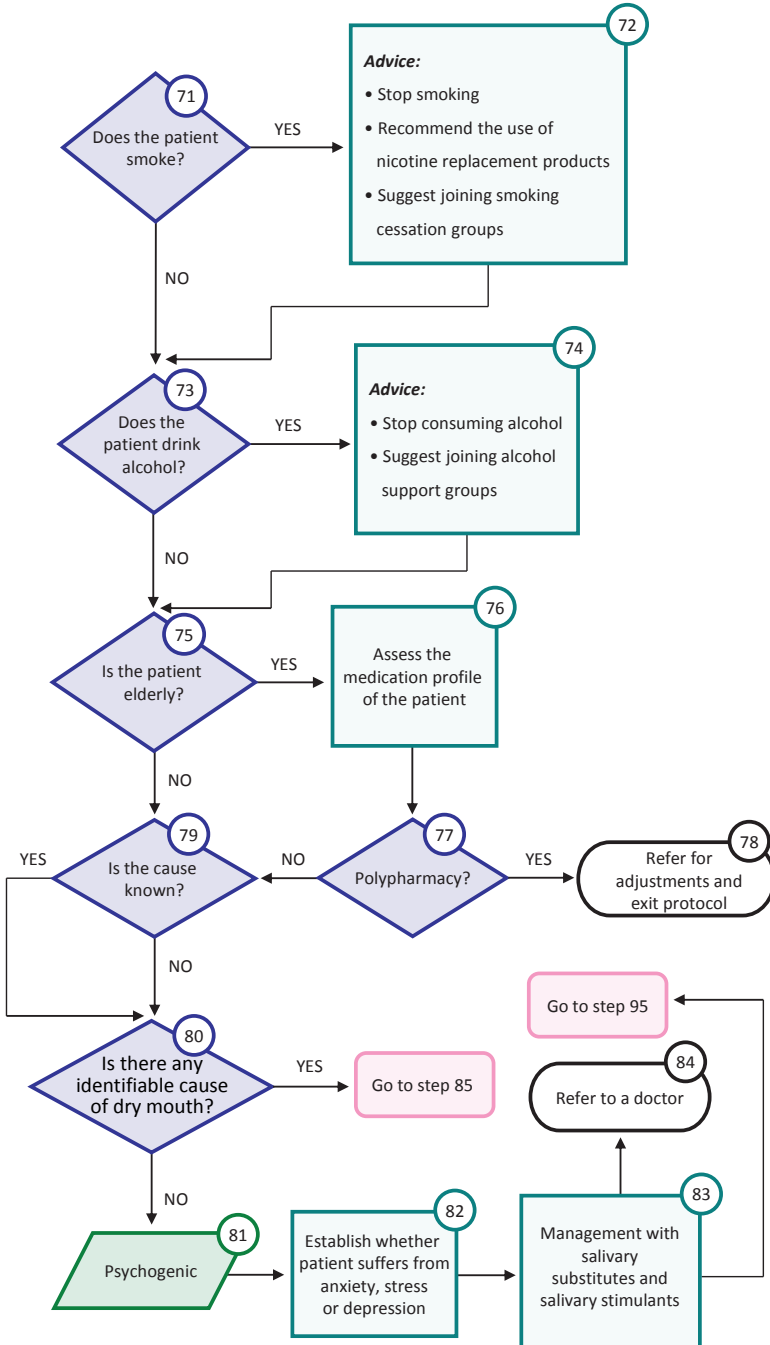
- * Dental abscess, phlegmon, perimaxillary cellulitis, pericoronitis,
- * Gingivitis, stomatitis,
- * Periodontitis,
- * Parotiditis, submaxillitis.
- * Preventive treatment of local infectious post-operative complications of stomatological and dental surgery.

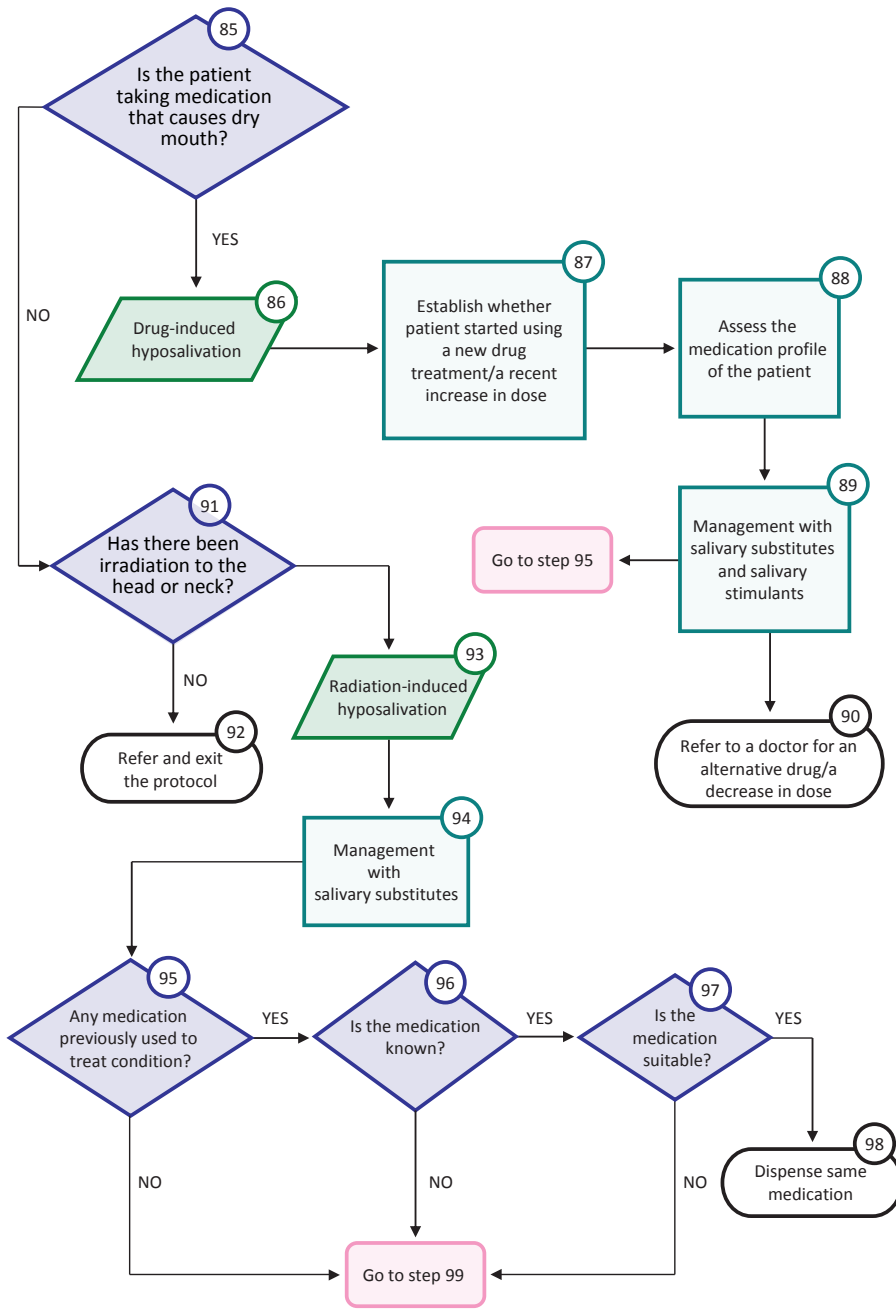
Dosing Curative treatment: Adults: 4 to 6 tablets daily in 2 to 3 divided doses with meals (i.e.: 3 to 4.5 MIU of spiramycin and 500 to 750 mg of metronidazole). In severe cases, the dosage may be increased to 8 tablets daily. **Children:** Between 6 to 10 years: 2 tablets daily (i.e. 1.5 MIU of spiramycin and 250 mg of metronidazole). Between 10 to 15 years: 3 tablets daily (i.e. 2.25 MIU of spiramycin and 375 mg of metronidazole).

Preventive treatment of local infectious post-operative complications of stomatological and dental surgery: Adults: 4 to 6 tablets daily in 2 to 3 divided doses with meals. Children: Between 6 to 10 years: 2 tablets daily (i.e. 1.5 MIU of spiramycin and 250 mg of metronidazole). Between 10 to 15 years: 3 tablets daily (i.e. 2.25 MIU of spiramycin and 375 mg of metronidazole). **Contraindications** Hypersensitivity to imidazoles, spiramycin and/or any of the excipients; In children under 6 years of age, due to the pharmaceutical form. **Avoid** in combination with disulfiram, alcohol and medicaments containing these substances **Special warnings and precautions of use** **Warnings:** Due to the presence of metronidazole, the risk of worsening of the neurological state in patients suffering from severe, central and peripheral neurological conditions, whether stable or progressive, should be taken into account. Due to the presence of sorbitol, this medicinal product is contraindicated in the event of intolerance to fructose. **Precautions for use:** Cases of hemolytic anemia have been very rarely reported in patients with a deficit of glucose-6-phosphate dehydrogenase; the use of spiramycin in this population is not recommended. In case of history of hematological problems caused by high-dose treatment and/or prolonged treatment, it is recommended to carry out regular blood tests, especially for the purposes of white-blood count control. In the event of leucopenia, the decision whether or not to continue treatment depends on the severity of infection. In case of prolonged treatment, inspect for signs indicating an undesirable effect of central or peripheral neuropathy nature (paresthesia, ataxia, vertigo, convulsions). **Interactions with other medicaments and other forms of interaction** **DUE TO SPIRAMYCIN:** Combinations to be taken into account: Levodopa (associated with carbidopa): Decrease in carbidopa absorption with decrease in the plasma concentrations of levodopa. Clinical control with adjustments of levodopa if necessary. **DUE TO METRONIDAZOLE:** Combinations not recommended Disulfiram, Delusional or confusional states. Alcohol Antabuse effect (disulfiram-like reaction i.e. hot flushes, redness, vomiting, tachycardia). Avoid taking alcoholic beverages and medicinal products containing alcohol during treatment with Rodogyl and for at least 48 hours afterwards. Combinations requiring specific precautions: Oral anticoagulants Increase of the oral anticoagulant effect and risk of haemorrhage due to decrease in hepatic metabolism. **Pregnancy and lactation** **Pregnancy** The use of this medicament may be allowed during pregnancy, if required, independently of the period. **METRONIDAZOLE:** There is inadequate evidence of the safety of metronidazole in pregnancy but it has been in wide use for many years without apparent ill consequence. Nevertheless metronidazole, like other medicines, should not be given during pregnancy or during lactation unless the physician considers it essential; in these circumstances the short, high-dosage regimens are not recommended. Metronidazole crosses the placental barrier and passes into maternal milk. **SPIRAMYCIN:** The use of spiramycin may be allowed during pregnancy, if required. Actually, the extensive use of spiramycin during pregnancy has not shown, up to now, any malformation or foetotoxic effect. **Lactation** Metronidazole and spiramycin pass into maternal milk; therefore, the administration of this medicament must be avoided during breast-feeding. **Effects on the ability to drive and the use machines** Patients shall be warned of potential risk of vertigo, confusion, hallucinations or convulsions and be advised not to drive vehicles or use machines in case such problems may occur. **Undesirable effects** **RELATED TO SPIRAMYCIN:** Gastro-intestinal disorders: Gastric pain, nausea, vomiting, diarrhoea and very rare cases of pseudo-membranous colitis. Skin and appendages: Eruption, urticaria, pruritus. Very rarely Quincke edema, anaphylactic shock. Central and peripheral nervous system: Occasional and transient paresthesias. Hepatic manifestations: Very rare abnormalities in hepatic tests. Blood cell line: Very rare cases of hemolytic anemia have been reported (cf. 4.4 "Special warning and precautions for use"). **RELATED TO METRONIDAZOLE:** Gastro-intestinal disorders: Benign digestion problems (epigastric pain, nausea, vomiting, diarrhoea) Glossitis with sensation of dryness of the mouth, stomatitis, metallic taste, anorexia, Exceptionally, cases of pancreatitis, reversible upon discontinuation of treatment. Skin and appendages: Constipation, pruritus, cutaneous eruption sometimes with fever Urticaria, Quincke edema, exceptionally anaphylactic shock. Central and peripheral nervous system: Cephalalgia (headaches), Peripheral neuropathies, Convulsions, vertigo, ataxia. Psychiatric problems Confusion, hallucinations. Blood cell line: Very rare cases of neutropenia, agranulocytosis and thrombocytopenia, pancytopenia. Hepatic manifestations: Very rare cases of reversible abnormalities in the hepatic function and cholestatic hepatitis. Other: Appearance of a brown-reddish colour of the urines due to the presence of water-soluble pigments resulting from the product's metabolism, myalgia, arthralgia and visual disturbances. **MARKETING AUTHORISATION HOLDER** Sanofi-Aventis Malta Triq Kan. K. Pirota Birkirkara. BKR 1114 Malta. Marketing Authorisation Number 082/02601 POM.

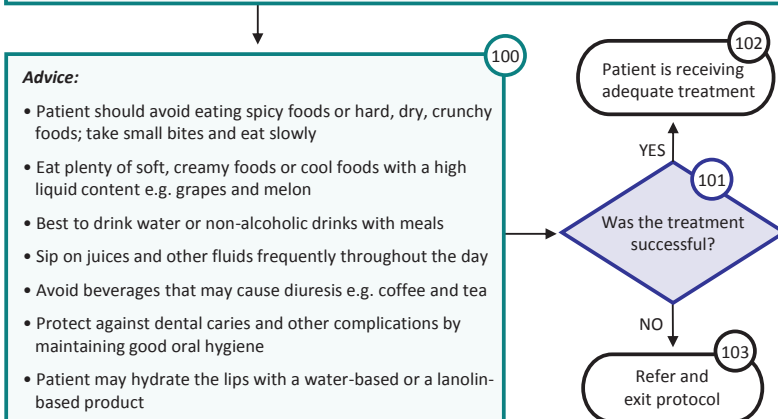
MT-SPM-11-03-01







Medication	Formulation/s	Frequency
Salivary substitutes: e.g.		
Xylitol, glucose oxidase, lactoperoxidase (biotène®, biotène® <i>oralbalance</i> ®)	<ul style="list-style-type: none"> Mouthwash Oral gel 	<ul style="list-style-type: none"> Rinse and gargle b.d. Apply to gums and tongue, as required
<ul style="list-style-type: none"> Xylitol, mineral salts spray Xylitol, Sodium fluoride, provitamin B5, vitamin E (Kin Hidrat) 	<ul style="list-style-type: none"> Oral spray Toothpaste 	<ul style="list-style-type: none"> Spray b.d. or t.d.s., as required Brush for 2-3 minutes t.d.s.
Casein Phosphopeptide – Amorphous Calcium Phosphate (GC Dry Mouth Gel)	<ul style="list-style-type: none"> Oral gel 	<ul style="list-style-type: none"> o.d. in the morning, apply generously
Salivary stimulants: e.g.		
Xylitol or sorbitol	<ul style="list-style-type: none"> Sugar-free chewing gum 	<ul style="list-style-type: none"> Use as required
Diabetic sweets	<ul style="list-style-type: none"> Sweets 	<ul style="list-style-type: none"> Use as required
Xylitol, betaine, olive oil (Xerostom® with Saliactive®)	<ul style="list-style-type: none"> Toothpaste Mouthwash Oral spray Saliva substitutes 	<ul style="list-style-type: none"> Toothpaste and mouthwash: t.d.s., after main meals Spray as required Apply saliva substitutes before bedtime
	<ul style="list-style-type: none"> Dental gum Pastilles 	<ul style="list-style-type: none"> Dental gum and pastilles: as required
Chlorhexidine	<ul style="list-style-type: none"> Mouthwash 	<ul style="list-style-type: none"> Rinse mouth for 1 minute, b.d.



dry mouth

affects more than **10%** of the population



COMMON CAUSES

Antidepressants, Antihistamines, Radiotherapy and Chemotherapy, Diabetes

COMPLETE TREATMENT FOR DRY MOUTH DISCOMFORT



SPRAY



TOOTHPASTE

- Hydrates and refreshes the oral cavity
- Restores the salivary balance
- Easy and convenient use

- Specific oral hygiene
- Protects against caries
- Protects gums

0%
ALCOHOL



Immediate
relief

XYLITOL (10%) MINERALS SALTS

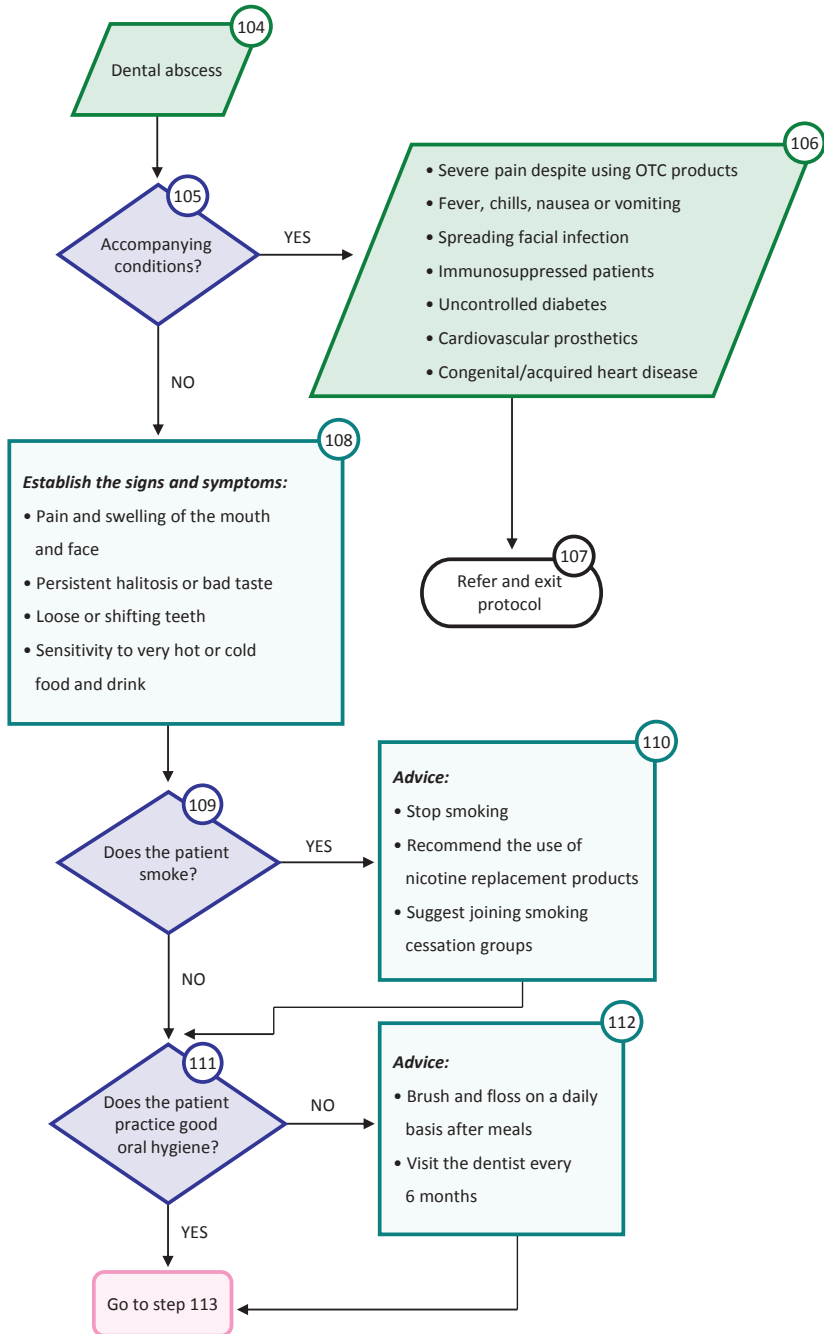


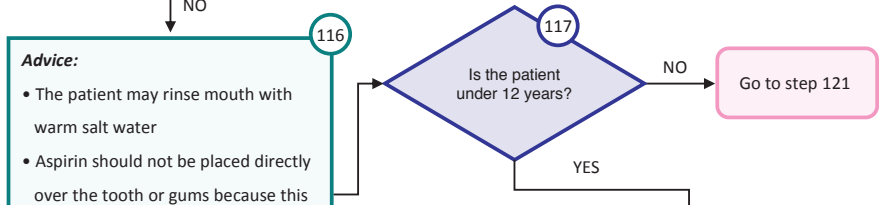
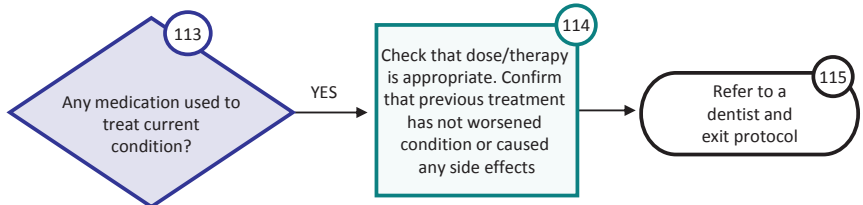
Effective
protection

SODIUM FLUORIDE
XYLITOL (10%)
PRO-VITAMIN B₅
VITAMIN E



ASK YOUR DENTIST, DOCTOR OR PHARMACIST FOR ADVICE. THIS WILL ENSURE OPTIMAL ORAL AND DENTAL HEALTH



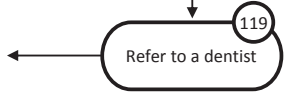


118

Medication	Formulation/s	Frequency
Paracetamol (Panadol®)	<ul style="list-style-type: none"> • Tablets • Oral suspension • Suppositories (Arfen®) 	<ul style="list-style-type: none"> • 15-20mg/kg orally q.d.s., or 30mg/kg rectally as a single dose
NSAIDs e.g. Ibuprofen (Nurofen®)	<ul style="list-style-type: none"> • Tablets • Oral suspension 	<ul style="list-style-type: none"> • 5-10mg/kg every 8 hours

120

Medication	Formulation/s	Frequency
Amoxicillin (Amoxil®) and Metronidazole (Flagyl®)	<ul style="list-style-type: none"> • Tablets • Capsules (amoxicillin only) • Oral suspension 	<ul style="list-style-type: none"> • 15- 25mg/kg/dose t.d.s., 10mg/kg/dose t.d.s., respectively
Spiramycin with Metronidazole (Rodogyl®)	<ul style="list-style-type: none"> • Tablets 	<ul style="list-style-type: none"> • 2-3 tablets daily
For beta-lactam resistant organisms:		
Co-amoxiclav monotherapy (Augmentin®)	<ul style="list-style-type: none"> • Tablets • Oral suspension 	<ul style="list-style-type: none"> • 22.5mg/kg/dose b.d.
In penicillin-allergic patients:		
Clindamycin (Dalacin C®)	<ul style="list-style-type: none"> • Capsules 	<ul style="list-style-type: none"> • 10mg/kg/dose t.d.s.



Step 120 shows routinely prescribed antibiotics for management of Dental Abscess

121

Medication	Formulation/s	Frequency
Paracetamol	<ul style="list-style-type: none"> • Tablets • Oral suspension • Suppositories 	<ul style="list-style-type: none"> • 0.5-1g q.d.s.
NSAIDs e.g. Ibuprofen	<ul style="list-style-type: none"> • Tablets • Oral suspension 	<ul style="list-style-type: none"> • 300-400mg t.d.s. or q.d.s.

122

Refer to a dentist

Step 123 shows routinely prescribed antibiotics for management of Dental Abscess

123

Medication	Formulation/s	Frequency
Amoxicillin (Amoxil®) and Metronidazole (Flagyl®)	<ul style="list-style-type: none"> • Tablets • Capsules (amoxicillin only) • Oral suspension 	<ul style="list-style-type: none"> • 250-500mg, 200mg, respectively, 8 hourly with meals for 3-7 days
Spiramycin with Metronidazole (Rodogyl®)	<ul style="list-style-type: none"> • Tablets 	<ul style="list-style-type: none"> • 4-6 tablets daily, in 2-3 divided doses
For beta-lactam resistant organisms:		
Co-amoxiclav monotherapy (Augmentin®)	<ul style="list-style-type: none"> • Tablets • Oral suspension 	<ul style="list-style-type: none"> • 375mg t.d.s. for 5 days
In penicillin-allergic patients:		
Clindamycin (Dalacin C®)	<ul style="list-style-type: none"> • Capsules 	<ul style="list-style-type: none"> • 150-300mg q.d.s. for 5 days





Section **3**
APPENDIX

Main predisposing factors of Recurrent Aphthous Ulcers

(Adapted from: Cawson RA, Odell EW. Cawson's Essentials of Oral Pathology and Oral Medicine. Edinburgh: Elsevier; 2002)

- Haematological deficiency states:
 - Low levels of iron
 - Low levels of folate or vitamin B₁₂
- Gastrointestinal disorders; coeliac disease, ulcerative colitis and Crohn's disease
- Exaggerated response to trauma
- Genetic predisposition
- Stress
- Hormonal disturbances
- Infections
- Immunological abnormalities

Medication	Formulation	Frequency	Notes
Steroid aerosols e.g. beclomethasone dipropionate (100 mcgs/puff)	Aerosols	50-100mcg sprayed on the oral mucosa b.d.	Able to deliver potent steroids to inaccessible areas e.g. oropharynx. Risk of steroid adverse effects with prolonged use.
Systemic drugs e.g. oral prednisolone, colchicine	Tablets	<ul style="list-style-type: none"> • Oral prednisolone 40mg for 5 days, dose to be reduced by 5mg every 2 days down to 5mg, then by 1mg per day <li style="text-align: center;">OR • Colchicine 500mcg/day 	Reserved for more severe ulceration. Significant risk of adverse effects.

(Adapted from: Cawson RA, Odell EW. Cawson's Essentials of Oral Pathology and Oral Medicine. Edinburgh: Elsevier; 2002; Scully C. Oral and Maxillofacial Medicine: The Basis of Diagnosis and Treatment. Edinburgh: Elsevier Churchill Livingstone; 2008)

Management for Major Aphthous Ulcers

- Clobetasol ointment in adhesive gel may be applied twice or three times daily for up to one week.
- If necessary the treatment may be prolonged for a further 3 days, along with the addition of an antimycotic agent e.g. chlorhexidine solution, and miconazole oral gel for 1 day.
- When the condition does not improve or in hard-to-reach ulcers, the patient may be prescribed oral corticosteroids such as 50mg prednisolone daily until the ulcers decrease to at least half of their original size, the dose is then to be tapered down slowly (Gandolfo et al, 2002).

Management for Herpetiform Ulcers

- Oral prednisolone 50mg is to be administered as a daily dose for 3 days, reduced to 25mg o.d. for another 3 days and then 3 tablets administered every other day until there is a reduction of at least half of the number of lesions (Scully, 2008).
- Parenteral or oral (tablets or oral suspension) aciclovir may be prescribed in immunocompromised patients (Scully and Felix, 2005).

Table 2 - NSAIDs	
Cautions	<ul style="list-style-type: none"> • Elderly • Hepatic or cardiac impairment
Contra-indications	<ul style="list-style-type: none"> • Hypersensitivity • Pregnant or breast-feeding mothers • Renal impairment • Severe heart failure • Haemophilia and bleeding disorders • History of, or acute peptic ulcer • Asthma
Common side-effects	<ul style="list-style-type: none"> • Gastro-intestinal discomfort, nausea and diarrhoea • Bleeding and ulceration • Hypersensitivity reactions e.g. rashes, angioedema
Common interactions	<ul style="list-style-type: none"> • Antidepressants • Antihypertensives • Corticosteroids
Notes	<ul style="list-style-type: none"> • To be taken with or after food to reduce gastric irritation. • If used in renal impairment, the lowest possible dose should be prescribed for the shortest possible time, along with monitoring of renal function. • May cause worsening of asthma.



Table 3 – Systemic Corticosteroids

<p>Cautions</p>	<ul style="list-style-type: none"> • Children and adolescents • Elderly • Hypertension • Pregnancy and breast-feeding • Recent myocardial infarction • Congestive heart failure • Hepatic and renal impairment • History of, or acute peptic ulcer • Diabetes mellitus • Osteoporosis • Glaucoma • Mental illness
<p>Contra-indications</p>	<ul style="list-style-type: none"> • Systemic infection • Live virus vaccines in immunosuppressive doses
<p>Common side-effects</p>	<ul style="list-style-type: none"> • Diabetes • Hypertension • Sodium and water retention • Potassium and calcium loss • Osteoporosis • Muscle wasting • Adrenal suppression • Immunosuppression • Suppression of growth In children • Gastro-intestinal effects e.g. dyspepsia, abdominal distension • Musculoskeletal effects e.g. muscle weakness • Endocrine effects e.g. menstrual irregularities, hirsutism • Ophthalmic effects e.g. glaucoma • Neuropsychiatric effects e.g. mood and behavioural disturbances <p>High doses may lead to:</p> <ul style="list-style-type: none"> • Cushing’s syndrome, with moon face, striae and acne
<p>Common interactions</p>	<ul style="list-style-type: none"> • Antiepileptics • NSAIDs • Antihypertensives • Oral Anticoagulants
<p>Notes</p>	<ul style="list-style-type: none"> • Gradual withdrawal of corticosteroids is recommended, as this may lead to acute insufficiency, hypotension or death. • Low maintenance dose reduces the occurrence of side-effects. • To be taken with or after food to reduce gastric irritation.



Table 4 – Drugs that may cause dry mouth

Pharmacological class	Examples of generic name/s
Antihistamines	<ul style="list-style-type: none">• loratidine• hydroxyzine• promethazine
Anticholinergics or antispasmodics	<ul style="list-style-type: none">• hyoscyamine• tolterodine• oxybutynin
Benzodiazepines	<ul style="list-style-type: none">• flurazepam• triazolam• temazepam
Antidepressants	<ul style="list-style-type: none">• clomipramine• sertraline• venlafaxine
Antidiarrhoeals	<ul style="list-style-type: none">• loperamide
NSAIDs	<ul style="list-style-type: none">• ibuprofen• celecoxib• naproxen
Antiparkinsonian drugs	<ul style="list-style-type: none">• levodopa• orphenadrine• amantadine
Diuretics	<ul style="list-style-type: none">• spironolactone• bumetanide• amiloride
Proton Pump Inhibitors	<ul style="list-style-type: none">• omeprazole• lansoprazole

(Adapted from: Azzopardi LM. Lecture notes in Pharmacy Practice. Pharmaceutical Press; 2010, p.193, 357-8)



Comparison of anticholinergic effects of different classes of xerogenic drugs

(Tables 5-7 - Adopted from: Azzopardi LM. Lecture notes in Pharmacy Practice. Pharmaceutical Press; 2010, p.193, 357-8)

Table 5 - Relative anticholinergic potency of antipsychotic drugs – phenothiazines	
Drug	Anticholinergic effects
Aliphatic e.g. chlorpromazine	4+
Piperazine e.g. trifluoperazine	2+
Piperidine e.g. thioridazine	5+

Table 6 - Relative anticholinergic potency of other antipsychotic drugs	
Drug	Anticholinergic effects
Thioxanthenes e.g. flupentixol	2+
Butyrophenones e.g. haloperidol	1+
Atypical e.g. clozapine	3+

Table 7 - Relative anticholinergic potency of antidepressants	
Drug	Anticholinergic effects
Amitriptyline	4+
Clomipramine	4+
Imipramine	3+
Maprotiline	2+
Fluoxetine	0
Paroxetine	1+
Venlafaxine	1+



Oral hygiene

(Adapted from: Mayo Clinic staff. Oral health: Brush up on dental care basics. *Mayo Clin Proc* [Online] 2009 [cited 2010 November 24]. Available from: URL: <http://www.mayoclinic.com/health/dental/DE00003>)

“Oral health begins with clean teeth. Too tired to brush your teeth? Too busy to floss? If you’re tempted to skip these daily chores, remember that your smile depends on these simple dental care habits” (Mayo Clinic, 2009).

Brushing teeth

Teeth should be brushed from two to three times daily with a soft-headed, soft-bristled toothbrush along with toothpaste which contains added fluoride. For greatest effect the toothbrush should be held at a slight angle against the teeth. Brushing should be gentle with regular back-and-forth motions, including the tongue and all the faces of the teeth to remove any mouth-borne bacteria. A toothbrush should be replaced regularly, every 3-4 months or once the bristles have frayed.

Electric- or battery-operated toothbrushes are indicated for those patients with reduced manual dexterity e.g. people with rheumatoid arthritis and the elderly.



Flossing teeth

Daily flossing is important, as floss reaches areas of the mouth which are inaccessible with a normal toothbrush. A piece of dental floss should be winded between the two middle fingers of each hand, leaving a small piece of floss in between to start flossing the first tooth. The floss should be gently pulled from the gumline to the upper part of the tooth, and to all sides of the tooth. The next tooth should be flossed with a new piece of floss.

Rinsing the mouth

In addition to daily brushing and flossing, mouthwashes may be used to help remove the debris and other contents from between the teeth. Mouthwashes may help in reducing the occurrence of plaque. Several different types of mouthwashes are available; with antiseptic or antimicrobial properties. The addition of alcohol to mouthwash may dry out the mouth, and therefore alcohol-free mouthwashes are preferred.

Regular visits to the dentist

In addition to daily brushing, flossing and rinsing, it is important to visit a dentist at least every 6 months. Dentists are health care professionals specialised in the buccal area and can therefore easily diagnose any oral problems.





Section 4
REFERENCES

References

- Azzopardi LM. Lecture notes in Pharmacy Practice. London: Pharmaceutical Press; 2010, p.193, 357-8.
- British Medical Association. The Royal Pharmaceutical Society of Great Britain. British National Formulary, Number 58, 2009.
- Cameron AC, Widmer RP. Handbook of Pediatric Dentistry. Edinburgh: Elsevier; 2008.
- Cawson RA, Odell EW. Cawson's Essentials of Oral Pathology and Oral Medicine. Edinburgh: Elsevier; 2002.
- Gandolfo S, Scully C, Carrozzo M. Oral medicine. Edinburgh: Elsevier Churchill Livingstone; 2006.
- Mayo Clinic staff. Oral health: Brush up on dental care basics. *Mayo Clin Proc* [Online] 2009 [cited 2010 November 24]. Available from: URL: <http://www.mayoclinic.com/health/dental/DE00003>.
- McLeod I, Crighton A. Practical Oral Medicine. United Kingdom: Quintessence Publishing; 2006.
- Mosby's Medical, Nursing & Allied Health Dictionary*, 6th edn. St Louis: Mosby; 2002.
- Nathan A. Non-prescription Medicines. London: Pharmaceutical Press; 2006, p.294.
- Rutter P. Community Pharmacy: Symptoms, Diagnosis and Treatment. Edinburgh: Elsevier Churchill Livingstone; 2004, p.98-102.
- Scully C, Cawson RA. Medical Problems in dentistry. Edinburgh: Elsevier Churchill Livingstone; 2005.
- Scully C, Felix DH. Oral medicine – Update for the dental practitioner: Aphthous and other common ulcers. *BDJ* 2005; 199: 259-264.
- Scully C. Oral and Maxillofacial Medicine: The Basis of Diagnosis and Treatment. Edinburgh: Elsevier Churchill Livingstone; 2008.





TANTUM VERDE®

FOR THE TREATMENT
OF PAIN AND IRRITATION OF THE
THROAT, MOUTH AND GUMS.

 Angelini



DISTRIBUTED BY

Chemimart

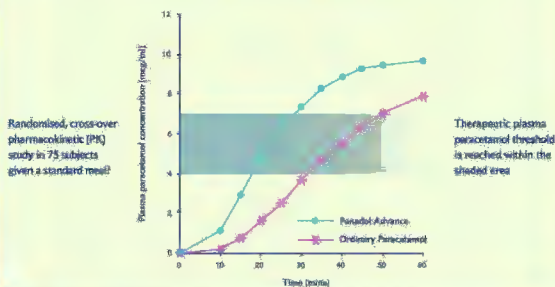
TEL: 2149 2212

Paracetamol tablets Reinvented

Introducing New Panadol Advance 500 mg Tablets, the only paracetamol formulation to contain the unique Optizorb™ disintegration system.

This allows the tablets to disperse up to 5 times faster in the stomach than ordinary paracetamol.¹

Panadol Advance reaches therapeutic levels faster than ordinary paracetamol²



From the above graph you can see Panadol Advance Tablets reach therapeutic levels faster than ordinary paracetamol.²

Recommend Panadol Advance to your patients to tackle everything from period pain to backache.

For relief from mild to moderate pain, help customers get their day back on track with Panadol Advance

Product information. Panadol Advance 500mg film coated Tablets (paracetamol). Contains disintegrant system to accelerate dissolution. **Uses:** Mild analgesic and antipyretic. **Dosage and administration:** Adults and children, 12 years and over: Two tablets at ≥ 4 hour intervals. Max. 8 tablets in 24 hours. Children 6-12 years: Half to one tablet at ≥ 4 hour intervals. Max. 4 tablets in 24 hours. Do not use for >3days without doctors advice. Children under 6 years: Not recommended. **Contraindications:** Hypersensitivity. **Precautions:** Severe renal/hepatic impairment, non-cirrhotic alcoholic liver disease. Concomitant use of warfarin/other coumarin anticoagulants,

domperidone, metoclopramide, colestyramine. Refer to doctor if persistent headache or non-serious arthritis requiring daily analgesia. **Pregnancy/breastfeeding:** Pregnancy: Refer to doctor. Breastfeeding: not contraindicated. **Side effects:** Hypersensitivity including skin rash, blood dyscrasias. **Overdosage:** Immediate medical advice due to risk of delayed, serious liver damage. **Legal category:** OTC. **Product licence number:** AA460/00701. **Product licence holder:** GlaxoSmithKline Consumer Healthcare, Brentford, TW8 9GS, U.K. **Package quantity:** Compact 12's. Date of last revision: November 2008. Panadol is a trade mark of the GlaxoSmithKline group of companies.



Disperses up to **5X** Faster
than ordinary paracetamol

gsk GlaxoSmithKline
Consumer Healthcare