

## INTRODUCTION

Systemic Lupus Erythematosus (SLE) is a chronic, multi-organ, autoimmune disease. It affected nearly 1 in 1000 of UK population in 2012 and most commonly presents in women in the reproductive age group<sup>1</sup>.  
Diagnosis is difficult due to multiple clinical presentations and non-specific symptoms. The disease is prone to relapses (or flares) and periods of remission.  
This case report discusses a 74 year old female with a 40 year history of SLE, who self referred to The Browning Centre, Special Care Community Clinic in Dorset.

## PRESENTING COMPLAINTS

- Two episodes of facial swelling related to UR2
- Cannot chew due to lack of back teeth
- Does not like the appearance of teeth, in particular the wear to the UL1, UL2, UL3 incisal edges and the overlapping of UL1 to the UR1 and mentioned aligners (the patient had seen them advertised on TV).
- Pain in LR3 when placing and removing lower partial denture due to tilting and looseness of the tooth.

## MEDICAL HISTORY

- SLE
- 2° Antiphospholipid syndrome
- Fibromyalgia
- Obstructive sleep apnoea syndrome (OSAS)
- Lichen planus (LP)
- Sjogren's syndrome (SS)
- Hypertension
- Pre diabetes
- Class 2 Obesity (BMI of 35-40)
- Asthma

**ALLERGIES**  
SUNLIGHT.  
ANTI Biotic - "CLARYCID"  
HIGH DOSE STEROIDS, ESPECIALLY INJECTED.  
IMPLANTS IN BODY.  
METALS - INCLUDING GOLD, NICKEL, AMALGAM FILLINGS, SETG  
LATEX + PLASTERS.  
SODIUM LAURYL SULPHATE, MINT, TOOTH PASTES,  
HAIR PRODUCTS, ETC. + "ORSODYL"  
NEON LIGHTING + CERTAIN LIGHT BULBS.  
TOMATOES, ACIDY FRUITS, CHILLI AND SPICES, ETC.

Fig 1 - List of allergies brought in by patient. Allergies reported by GMP were clarithromycin only.

## SOCIAL HISTORY

Ex-smoker, now uses electronic cigarette. Does not drink alcohol.  
Walks with a stick  
Lives alone, relies on hospital transport to get to clinic.

## DENTAL HISTORY

Has worn lower partial denture for many years.  
Gives history of extraction of upper left molars and debridement of sockets with OMFS  
Under Oral Medicine Team at Eastman for LP  
No dental anxiety and can manage treatment under LA alone.

## CLINICAL EXAMINATION

Extraoral- No palpable lymph nodes.  
Intraoral- Good oral hygiene. Ulceration on left buccal mucosa (Fig 5).  
Desquamative gingivitis (Fig 3).  
Challacombe Scale of Oral Dryness: 6 (Altered gingival architecture)



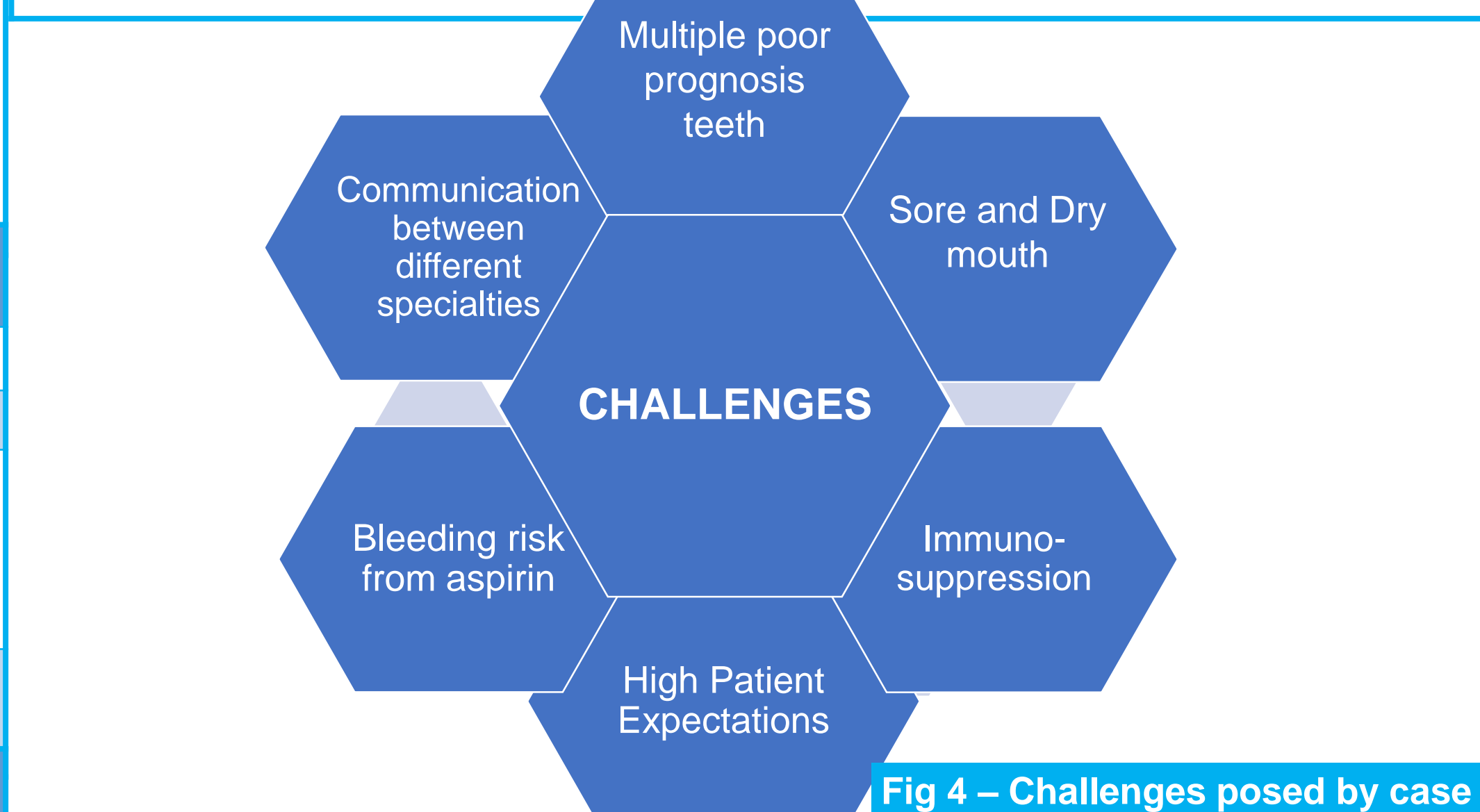
Fig 2 - DPT



Fig 3 - Clockwise from top left, photograph at presentation showing desquamative gingivitis, upper standard occlusal radiograph showing periapical radiolucency associated with UR2 post crowned tooth, Periapical radiograph of UL3 with periodontal bone loss and UL2 pontic and Periapical radiograph of UR6, UR5, UR4, UR3 with periodontal bone loss, defective crowns and subgingival calculus.

## DIAGNOSES

Chronic apical periodontitis UR2  
Generalised Periodontal Disease, Stage IV, Grade C.  
Physiological toothwear  
Deteriorating restorations in UR1, and UL1  
Enamel only mesial caries UL1, UR1  
Oral ulceration and desquamative gingivitis  
Xerostomia  
Loss of posterior support



## INITIAL MANAGEMENT

Clarification of history from OMFS  
Extraction of UR2 for replacement with immediate denture, designed for transition, given other poor prognosis teeth present.  
Prescription of Beclometasone Dipropionate inhaler for topical use on ulceration, and communication with Eastman regarding current ulceration  
Re-prescribe A.S Saliva Orthana spray and Bioextra gel as patient has run out.  
Adjustment of /P around the drifting LR3 to make more comfortable.

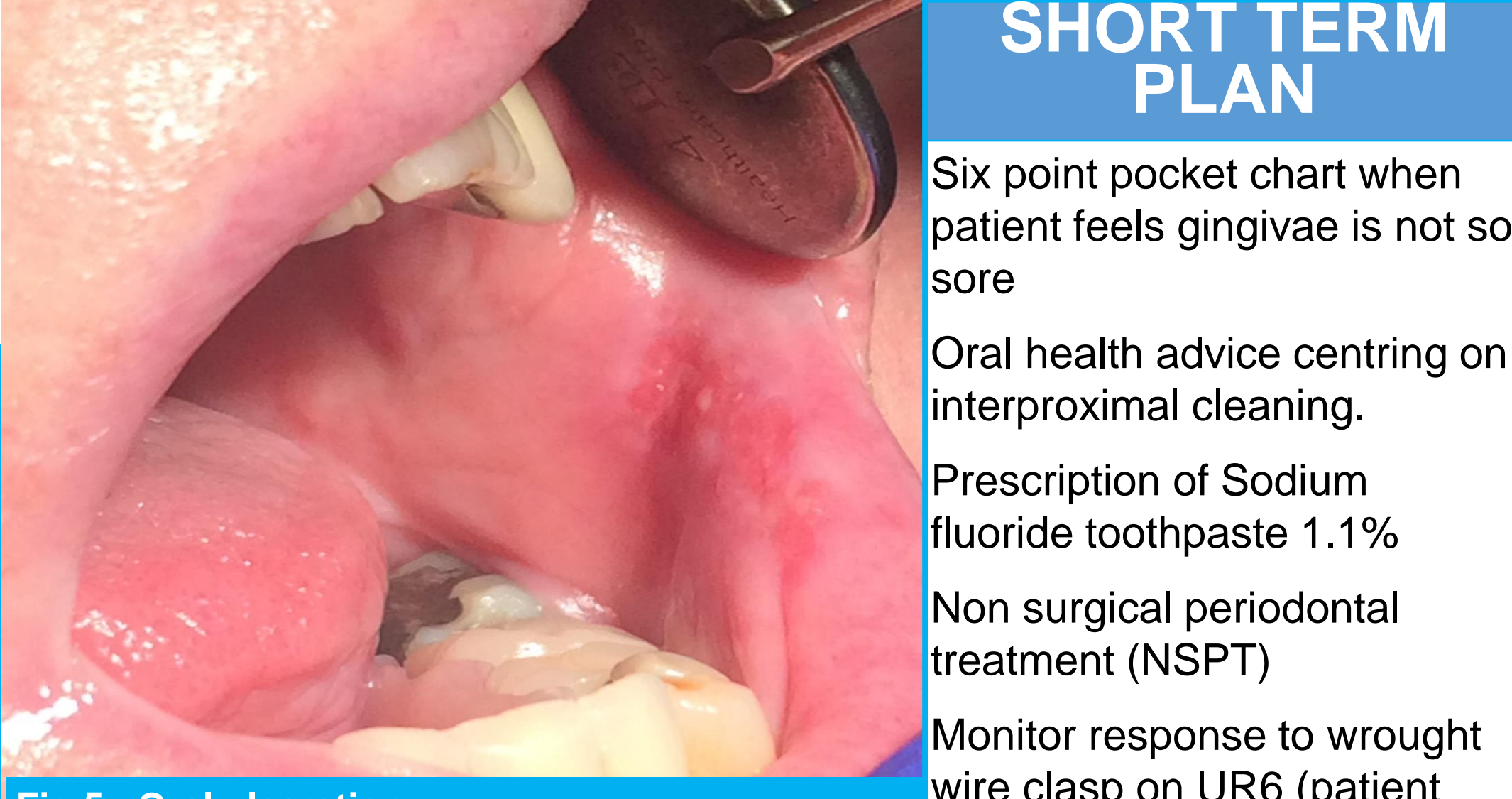


Fig 5 - Oral ulceration

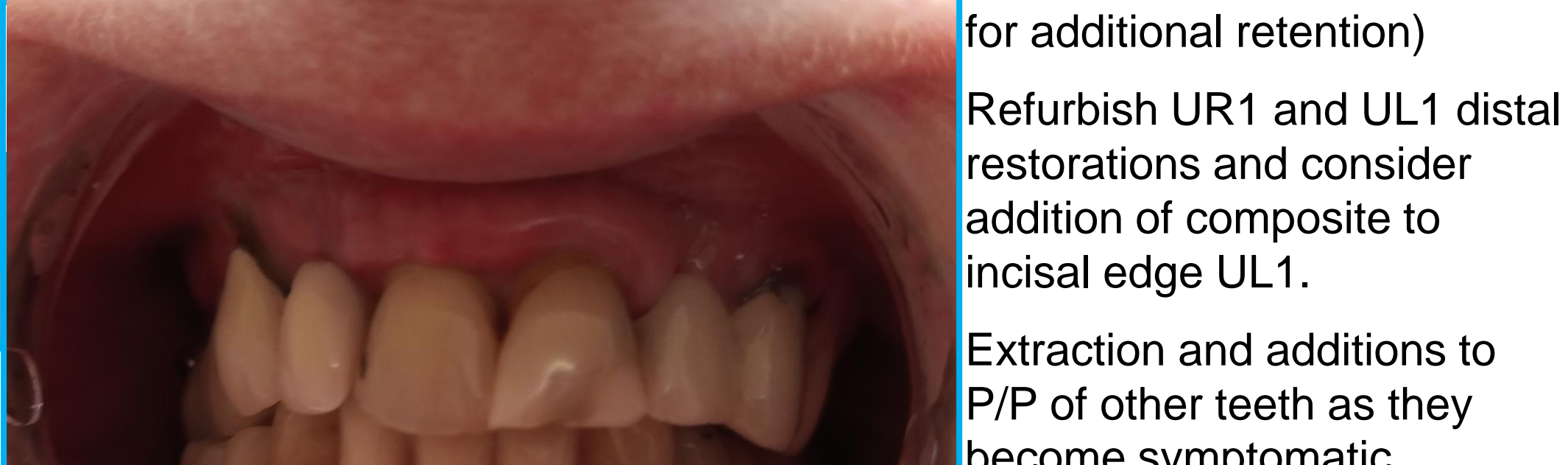


Fig 6 - Post fit of immediate denture

Six point pocket chart when patient feels gingivae is not so sore  
Oral health advice centring on interproximal cleaning.  
Prescription of Sodium fluoride toothpaste 1.1%  
Non surgical periodontal treatment (NSPT)  
Monitor response to wrought wire clasp on UR6 (patient chose to risk reaction to metal for additional retention)

## SHORT TERM PLAN

Refurbish UR1 and UL1 distal restorations and consider addition of composite to incisal edge UL1.  
Extraction and additions to P/P of other teeth as they become symptomatic

## LONG TERM PLAN

New denture when healing complete  
Maintenance periodontal therapy

## SYSTEMIC LUPUS ERYTHEMATOSUS

SOAPBRAIN MD	Acronym for recalling symptoms	1997
<b>S</b>	Serositis	ACR criteria is 4 out of 11 criteria as per "SOAPBRAIN MD" mnemonic <sup>3</sup>
<b>O</b>	Oral Ulceration	
<b>A</b>	Arthritis	2012
<b>P</b>	Photosensitivity	
<b>B</b>	Blood disorder	2019
<b>R</b>	Renal Disease	
<b>A</b>	ANA positive	Most recent criteria is EULAR/ACR. Now requiring positive Anti Nuclear Antibody (ANA) and cumulative scoring from 7 clinical (constitutional, haematologic, neuropsychiatric, mucocutaneous, serosal, musculoskeletal, renal) and 3 immunologic (antiphospholipid antibodies, complement proteins, SLE-specific antibodies) domains. <sup>5</sup>
<b>I</b>	Immunological disorder	
<b>N</b>	Neurological disease	
<b>M</b>	Malar Rash	
<b>D</b>	Discoid Rash	

Fig 7- Changing classification criteria since patient was originally diagnosed.

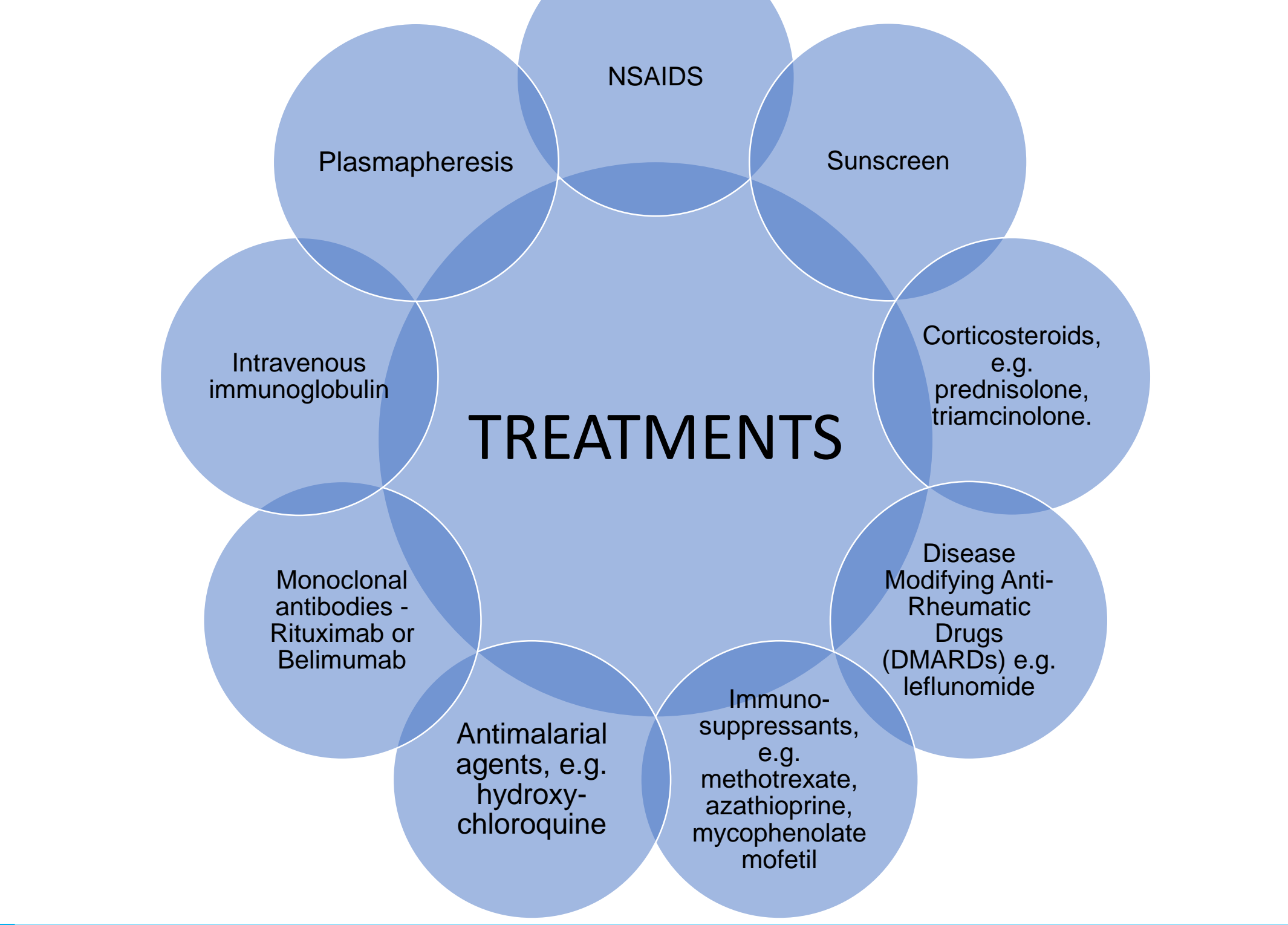


Fig 7- Treatment for SLE. These will depend upon severity of disease and response. This patient reports having had plasmapheresis when initially diagnosed in the 80s, which is used infrequently today.

## DISCUSSION

This case demonstrates the complexity of treating a patient with a variety of autoimmune presentations. The patient presented with a request to restore function and aesthetics but there was a need to "deliver bad news" to explain the dental diagnoses and their implications, and there was a need to manage expectations.

## CHALLENGES WITH MANAGING AN OLDER PERSON WITH SLE

### ORAL ULCERATION

Oral lesions are common in SLE<sup>6</sup>. The ulceration may cause patients to avoid daily oral hygiene measures due to soreness, this in turn may impact on their oral health.

**Relevance to older people:**  
Polypharmacy increases with aging so there is an increased risk of adverse drug reactions presenting as oromucosal lesions<sup>7</sup> in addition to SLE oral ulceration.

### XEROSTOMIA

Xerostomia can be caused by SLE or by SS, which is a condition frequently found alongside SLE. Xerostomia will increase the risk of caries and can make wearing dentures difficult.

**Relevance to older people:**  
As we age there is an increased likelihood of taking medications which also cause a dry mouth<sup>7</sup>.

### INFECTION RISK

This can be from immunosuppressant medications or from active SLE which can cause neutropenia. There is some evidence of increased risk of Infective Endocarditis (IE) with SLE<sup>8</sup>.

### Relevance to older people:

There is an increasing risk of cancers related to immunosuppression, e.g. Non-Hodgkin's Lymphoma, Cervical, Vulval, Lung and Thyroid cancer. Co-morbidities, acquired due to aging, will put a patient at even higher risk of opportunistic infections such as candidosis. The use of immunosuppressants such as Azathioprine can reduce response to vaccinations, which is even more relevant in the age of COVID-19. With increased years, a patient may acquire heart valve damage which increases risk of IE.

### BLEEDING RISK

Because 2° Antiphospholipid syndrome is frequently found with SLE, there may be 2° prevention of arterial/venous thrombotic events by anticoagulation with warfarin or antiplatelet medication.

Thrombocytopenia can be found with active SLE. Bone marrow suppression can be found with certain immunosuppressants.

### Relevance to older people:

There is increasing atherosclerotic plaques with age. There may also be increased cardiovascular complications such as atrial fibrillation, for which patients may be anticoagulated.

### MRONJ RISK

This can be due to long term treatment with corticosteroids causing osteoporosis, and subsequent treatment with bisphosphonates. Rituximab is a treatment for SLE, and there is some evidence of association with MRONJ<sup>9</sup>.

### Relevance to older people:

Osteoporosis becomes increasingly common with increasing age<sup>10</sup> so will be of increasing risk of being on a bisphosphonate or having had a fragility fracture and potential subsequent impact on mobility.

### PERIODONTAL DISEASE (PD)

There is suggestion of "a possible bidirectional association between PD and SLE"<sup>11</sup>. Optimal management of SLE may have a positive impact on PD, and vice versa.

### Relevance to older people:

With aging there is increasing risk of Type II diabetes, and there is a well known bidirectional association with PD and diabetes.

### SENSITIVITIES

There is evidence that certain materials used in dentistry can cause flares e.g. nickel, gold, mercury, causing type IV allergy. SLE patients exhibit more tooth loss than healthy population and therefore may be more likely to come across dental materials for replacing teeth<sup>8</sup>. Photosensitivity is also common which can include fluorescent lighting<sup>8</sup>.

### Relevance to older people:

From the 2016 PHE survey of Mildly Dependent Older People, 7.5% of those over 65 years had a fixed replacement of a tooth, and 53.1% had a removable replacement<sup>12</sup>, so extrapolating this to the older population with SLE there is a high likelihood of an older person with SLE to be exposed to dental materials which could cause a flare.

### RENAL IMPAIRMENT

About one-third of SLE patients in the UK develop Lupus Nephritis (LN)<sup>1</sup>. With renal impairment there may be the need to adjust the dose of certain medications prescribed in dentistry which are eliminated by kidneys, e.g. Amoxicillin, depending on level of kidney function.

### Relevance to older people:

"There is a clear association between increasing age and higher CKD stage 3-5 prevalence; with 1.9% of people aged 64 and under estimated to have CKD stage 3-5, 13.5% of people aged 65-74 and 32.7% of people aged 75 and over"<sup>13</sup>, so older people with SLE have an increased risk of having some renal impairment in addition to their SLE.

## CONCLUSIONS

This case demonstrates the complexity of history taking, information gathering and treatment planning for an older person with a long-term diagnosis of SLE and other autoimmune diagnoses, who may present to a Primary Dental Care setting.

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