Inspect the skin to establish the extent of ‘submarine’ comedones
**INTRODUCTION**

This ‘self-test questionnaire’ has been written by Dr Brian Malcolm, based on the recently updated (2014) Chapter 6 “Acne” of the Core Tutorials in Dermatology for Primary Care. This revised Chapter has been sent out to healthcare professionals with the compliments of Dermal Laboratories. If you have not received a copy of this updated chapter, you can order a copy from Dermal at the address below. Alternatively, the Chapter is available to download from the Dermal website www.dermal.co.uk within the Healthcare Professionals Resources section.

**RESOURCES FOR MANAGING ACNE AVAILABLE FROM DERMAL**

We have available a Medicine Matters paper, which outlines the management of acne in primary care and different treatment options. There is also a useful algorithm included for the management of acne which suggests pathways for treating the condition. To request a copy please contact Dermal at the address below.

**PATIENT EDUCATION**

To encourage better understanding of acne and to provide tips, patient advice leaflets are available. These are available to download from the Patient Resources section of the Dermal website www.dermal.co.uk.

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**Sponsored by Dermal Laboratories, Tatmore Place, Gosmore, Hitchin, Herts, SG4 7QR, UK. TEL: (01462) 458866.**
1. The presence of which type of lesions are a prerequisite for a diagnosis of acne?

2. What type of drugs are most directed against comedonal acne?

3. What levels of resistance are shown by *P. acnes* to erythromycin?

4. What percentage of patients demonstrate improvement of their acne after 3 months treatment with Dianette?

5. Name two types of scarring seen in acne.
6. What are the most common side-effects of systemic isotretinoin?

7. What are the potential side-effects of minocycline?

8. What is the peak age of severity of acne for males?

9. What is the principle mode of action of benzoyl peroxide?

10. From what natural resource is nicotinamide used in the treatment of inflammatory acne derived from?
11. What did I find useful about the learning module on ‘Acne’?

12. Having reflected on this module, how might my practice change in managing acne?
ANSWERS (PLEASE TURN UPSIDE DOWN)

QUESTION 5.
Answer: Any of atrophic, hypertrophic, keloid or ice-pick
Ref page 1

HYPERTROPHIC/KELOID SCARS
Keloid Scars – Elevated, surface smooth and pink with irregular shape.
ATROPHIC MACULAR SCARS
Atrophic Macular Scars – Depressed 5-20mm diameter, typically red or violaceous.
ICE-PICK SCARS
Ice Pick Scars – Small, superficial to deep with well defined edge.

QUESTION 6.
Answer:
• Dry skin
• Cheilitis
• Myalgia
• Conjunctivitis
Ref page 11
Common side effects are cheilitis, which is almost invariable, dry skin, mild conjunctivitis and myalgia. More rarely, hyperhidrosis, myalgias and arthralgias afe effects including headaches. A lupus like syndrome, benign hypertension and some benign skin rashes may occur with extended use of tetracyclines. Some authors recommend regular blood monitoring with liver function, ANF (antinuclear factor) and ANCA (antineutrophil cytoplasmic antibody).

QUESTION 7.
Answer:
• Lupus like syndrome
• Hepatitis
• Skin pigmentary disturbances
• Benign intracranial hypertension
Ref page 9
Although all the antibiotics used in the long-term treatment of acne are generally very well tolerated, minocycline does have the risk of significant but rare side effects including headaches and disturbed liver function and high blood pressure can occur.

QUESTION 8.
Answer: Age 16-19
Ref page 1
Acne, unarguably, is ‘core’ clinical material in dermatology for primary care physicians and specialists alike. It affects to some degree 85% of adolescent females and 95% of males, although it is only considered clinically significant in females and 95% of males, although it is only considered clinically significant.

QUESTION 9.
Answer: It works as an antimicrobial active against P. acnes
Ref page 5
Works predominately as an antimicrobial by virtue of oxidation of anaerobic P. acnes, therefore most useful for inflammatory acne with the presence of P. acnes. Works predominantly as an antimicrobial by virtue of oxidation of anaerobic P. acnes, therefore most useful for inflammatory acne with the presence of P. acnes.

QUESTION 10.
Answer: Vitamin B3
Ref page 6
Nicotinamide • Vitamin B3 derivative • Active against inflammatory acne • Similar in efficacy to topical antibiotics but with no risk of resistance.
**QUESTION 1.** Answer: Comedones (can be both open and closed) 
Ref page 1

"The diagnosis of acne rarely poses problems to the physician. However, one should be able to demonstrate the presence of both comedones and papules/pustules. The earliest expression of the disease process is the microcomedone; mid-facial comedones may pre-date inflammatory acne by several years. Subsequent lesions which must be confidently differentiated by the physician are both closed and open comedones (white and blackheads), papules, pustules, nodules and a variety of scars, atrophic, ice-pick and hypertrophic/keloid. It is the recognition of 'the lesion mix' that determines both the potential severity of the acne and the rationale for individually selected treatment regimes."

**QUESTION 2.** Answer: Retinoids (synthetic Vitamin A derivatives) 
Ref page 6

"Indicated for treatment of comedonal acne. Most effective against open comedones, but regular treatment may prevent progression of the microcomedone and consequently decrease subsequent acne severity."

**QUESTION 3.** Answer: 60-70% 
Ref page 8

"In vitro studies demonstrate alarming rates of resistance to antibiotics in common usage. Resistance to erythromycin has been recorded as high as 60%-70% of all community P. acnes. Resistance to erythromycin has been recorded as high as 60%-70% of all community P. acnes. The increasing incidence of resistance in acne patients is shown in the graph."

**QUESTION 4.** Answer: 80% 
Ref page 9

"It works primarily as an anti-androgen and has some potential to reduce sebum production. The average reduction is 30% and 80% of patients show improvement after 3 months of treatment."

"The increasing incidence of resistance in acne patients is shown in the graph."

**ANSWERS**
...inflammatory acne and its associated redness

...to help patients with inflammatory acne

...Rx Nicam® Gel
nicotinamide

An effective treatment without antibiotics

“...4% nicotinamide gel is of comparable efficacy to 1% clindamycin gel in the treatment of acne vulgaris. Because topical clindamycin, like other antimicrobials, is associated with emergence of resistant microorganisms, nicotinamide gel is a desirable alternative treatment for acne vulgaris.”

After eight weeks treatment nicotinamide gel showed:

- 38% reduction in Acne severity rating
- 52% reduction in Papule-pustule count
- 43% improvement on Physician Global Evaluation
- 60% improvement on Patient Global Evaluation
- 68% improvement on Physician Global Evaluation
- 82% improvement on Patient Global Evaluation

Nicam Gel Prescribing Information

Nicam™ 4% w/w Gel

Nicotinamide 4% w/w

Use: For the topical treatment of mild to moderate inflammatory acne vulgaris.

Directions: Apply to the affected area twice daily after the skin has been thoroughly washed. Enough gel should be used to cover the affected area.

Contra-indications, warnings, side-effects etc: Please refer to SPC for full details before prescribing. Do not use if sensitive to any of the ingredients. In the unlikely event of a reaction stop treatment. Keep away from the eyes and mucous membranes, including those of the nose and mouth. May cause dryness of the skin. Other less frequent side effects include pruritus, erythema, burning sensation and irritation. If excessive dryness, irritation or peeling occurs reduce the dosage to one application per day or every other day.

Package quantity, NHS price and MA number:

- 60g tube £7.10, PL00173/0166.

Legal category: P

MA holder: Dermal Laboratories, Tatmore Place, Gosmore, Hitchin, Herts, SG4 7QR, UK.

Date of preparation: November 2013. ‘Nicam’ is a trademark.

Adverse events should be reported. Reporting forms and information can be found at www.mhra.gov.uk/yellowcard. Adverse events should also be reported to Dermal.