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| **GP MANAGEMENT PLAN. 721 (Acne)**  |
| **Patient problems / needs** | **Goals - changes to be achieved** | **Treatments services and patient actions** | **Arrangements for treatments** |
| **1. General** |
| Patient's understanding of acne vulgaris  | Patient to have a clear understanding of acne vulgaris and patient's role in managing the condition | Patient education  | GP / nurseDermatologist |
| Comedones are the distinguishing features between acne rosacea and acne vulgaris. They are keratin-filled plugs that can be described as open or closed.  |
| Open comedones are commonly referred to as blackheads; the black appearance is due to oxidisation of keratin plugs.  |
| Closed comedones are whiteheads. |
| Pustules occur when follicular inflammation is such that large collections of neutrophils collect.  |
| Cysts are follicular-lined keratin-filled structures that dilate.  |
| Nodules occur when there is further inflammation. These are clinically red, tender, palpable lesions. This is where the follicular structures have ruptured. Scarring can be the final outcome once healed. |
| **2. Lifestyle** |
| Nutrition | Maintain healthy diet | Patient education | GP to monitorDietician |
| Height:Weight:BMI:Waist: | Ideal: BMI ≤ 25 kg/m2Ideal waist circumferenceMen <94cmsWomen <80cms | MonitorReview 6 monthly | Patient to monitorGP/nurse to review |
| Physical activity | Exercise at least 30 minutes walking or equivalent 5 or more days per week | Patient exercise routine | Patient to implement |
| **3. Measurements** |
| Blood Pressure | Ideal:< 130/80 mm Hg HR: 60-100bpm regular | Check every 6 months | PatientGP/nurseDermatologist  |
| Liver function testALT: ALP: AST: Total bilirubin:Albumin: GGT: Total Protein:  | Normal result to exclude dysfunction/diseaseALT: 5-30 U/LALP: 20-105 U/LAST: 10-35 U/LTotal bilirubin 3-15 umol/LAlbumin: 33-46 g/LGGT: 5-35 U/LTotal Protein: 64-81 g/L  | Check every 6-12 months | GP/nurseDermatologist |
| LipidsChol:Trig:HDL: LDL: | Ideal:Chol < 4.0 mmol/L Trig < 2.0 mmol/L HDL > 1.0 mmol/LLDL < 2.5 mmol/L | Check every 6-12 months | GP/nurseDermatologist |
| Kidney function testCreatinine:Albumin:ACR:eGFR: | Normal result to exclude dysfunction/disease6.0 - 18 mmol/L spot creatinine< 20 mg/L spot albumin< 3.5 mg/mmol women ACR (< 2.5 men)>90 ml/min eGFR | Check every 6-12 months | GP/nurseDermatologist |
| **4. Skincare** |
| Treat your skin gently and avoid exfoliants, scrubs, brushes and rough washcloths.Use a soap-free gentle cleanser morning and night. Pat dry. Do not rub/scrub.Apply a moisturiser with SPF 50+ following your morning cleansing routine.At night, after your cleansing routine, gently apply a small amount of Epiduo/Acnatac to the affected areas (a pea-size amount will be sufficient to cover the entire face).If applying foundation, avoid oil-based products, water or mineral-based foundation is better suited to sensitive, acne prone skin. |
| **5. Topical**  | Topical comedolytics are thought to unblock the pilosebaceous duct and/or act as antibacterial agents. These products are of value in very mild acne.  |
| Benzoyl peroxide  | a comedolytic and antibacterial agent and available over the counter in many different combinations and formulations. Azaleic acid is also available over the counter.  | Apply as directed, cease application of irritation or allergy occurs and consult with medical doctor | PatientGP/nurseDermatologistpharmacist |
| Salicylic acid and alpha hydroxy acids (eg glycolic acid)  | act as keratolytics that open comedones.  | Apply as directed, cease application of irritation or allergy occurs and consult with medical doctor | PatientGP/nurseDermatologistpharmacist |
| Topical retinoids (vitamin A derivatives)  | are the most effective comedolytics available. They may be quite irritating to delicate skin types and are associated with the potential for photosensitivity. Hence, nightly application is required.  | Apply as directed, cease application of irritation or allergy occurs and consult with medical doctor | PatientGP/nurseDermatologistpharmacist |
| Patients need to be instructed and counselled on how to use these agents to reduce facial erythema and cutaneous desiccation, particularly in the first couple of weeks of treatment. Topical retinoids are not recommended during pregnancy, although there is no evidence of foetal harm. If a user becomes pregnant, it is quite safe to stop using these agents. |
| **6. Medication** |
| Medication review | Correct use of medications, minimise side effects | Patient educationReview medications | GP to review and provide education |
| **Epiduo/Acnatac** can be mixed with QV Ultra-Calming moisturiser initially to reduce the risk of irritation. Use this combination on alternate nights for 2 weeks and after 2 weeks, proceed to nightly application.Please note: If an application of Epiduo/Acnatac is missed, apply at the usual time the following night do not double the application and if dryness, redness or irritation occurs, reduce the frequency of application and/or take a short break from treatment. Continue your general skin care regime during this time.Recommended product lines for sensitive, acne prone skin are:**La Roche Posay** – Toleraine, Effaclar, Eau Thermale**Avene** – Skin recovery cream, Extra gentle cleanser, Thermal Spray, Micellar water**QV** – Azclear foaming cleanser, medicated lotion (azelaic acid), soothing gel and day moisturiser with SPF30 |
| **Systemic treatments** are required when topical agents as monotherapy are ineffective. They are usually indicated when the clinical lesions become more papular, nodular, pustular and, especially, cystic. A number of systemic antibiotics are routinely used. It is worth stressing at this point that systemic treatments take weeks to months to become effective. The most popular systemic agent in Australia is **doxycycline** at a dose of 50 mg daily. Troublesome photosensitivity is an issue, as are administration difficulties. These medications need to be taken one hour before or two hours after a meal. This is problematic when dealing with teenage patients, as a guideline, treatment with antibiotics should be reviewed every 3-6 months (RACGP). |
| **Combined oral contraceptives** more likely to improve acne are those containing cyproterone acetate, desogesterel, dienogest, drospirenone or jestodene. Clinically, nearly all hormonal therapies are effective in the long-term control of acne; however, onset of visible improvement is very slow and clinical effects take at least three months to become apparent, with best results seen over six months (RACGP). |
| **Prescription of isotretinoin** in Australia can only be prescribed by specialist practitioners, who are predominantly dermatologists. Isotretinoin is a synthetic vitamin A derivative that is thought to reduce sebaceous gland activity. In addition, it is comedolytic and anti-inflammatory. A proper course of isotretinoin should bring long-term remission of acne in 80% of patients. It does, however, have multiple side effects, especially mucocutaneous effects. These are frequently minor but in some individuals can be quite problematic. Of prime importance, isotretinoin is teratogenic and pregnancy must be avoided throughout treatment and for one month after cessation of therapy. The teratogenic effects predominate in very early foetal development. The standard practice is for patients to undergo pregnancy testing and counselling prior to starting this medication (RACGP). |
| **7. Scars** |
| ice‑pick (narrow and deep), | TCA X spot treatments, chemical peel (TCA, Salicylic Acid, Tretinoin), IPL/Laser or skin needling and good skincare and SPF30+ | Follow up treatments may be required | GP/nurseDermatologist  |
| atrophic scars (flat and slightly depressed) with a thinnerepidermal surface. | chemical peel (TCA, Salicylic Acid, Tretinoin), laser, skin needling, punch excision or Subscision and good skincare and SPF30+ | Follow up treatments may be required | GP/nurseDermatologist  |
| keloids and hypertrophic scars extend beyond site of origin (heaped and smooth) | These occur in the more severe forms of acne and once present they may be permanent.Steroid injections, surgical removal, laser and good skincare and SPF30+ | Follow up treatments may be required | GP/nurseDermatologist |
| Box scars (depressed scars that have a box-like shape) | Punch excision, Subscision, TCA X spot treatments, chemical peel (TCA, Salicylic Acid, Tretinoin), IPL/Laser or skin needling and good skincare and SPF30+ | Follow up treatments may be required | GP/nurseDermatologist |
| Rolling scars (don’t have a sharp drop-off at the edge) | Chemical peel (TCA, Salicylic Acid, Tretinoin), IPL/Laser or skin needling and good skincare and SPF30+ | Follow up treatments may be required | GP/nurseDermatologist |
| Post inflammatory pigmentation (darker or discoloured patch of skin where acne was) | Chemical peel, laser/IPL, hydroquinone or retinoids and good skincare and SPF30+ | Follow up treatments may be required | GP/nurseDermatologist |
| **8. Psychosocial** |
| Mood and distress from acne | Patients with quite minimal acne may be emotionally devastated and considerably impaired by their perception of their acne. Occasionally, patients with quite severe nodular cystic acne and scarring appear in the consultation to be minimally affected and have low levels of enthusiasm for treatment | Consider K10 and MH Treatment plan | GP |
| DLQI | Normal to low impact on quality of life | Monitor every visit | GP/nurseDermatologist |
| CADI | Normal to low impact on quality of life | Monitor every visit | GP/nurseDermatologist |