NICE National Institute for Health and Care Excellence

Identifying and managing long-term complications

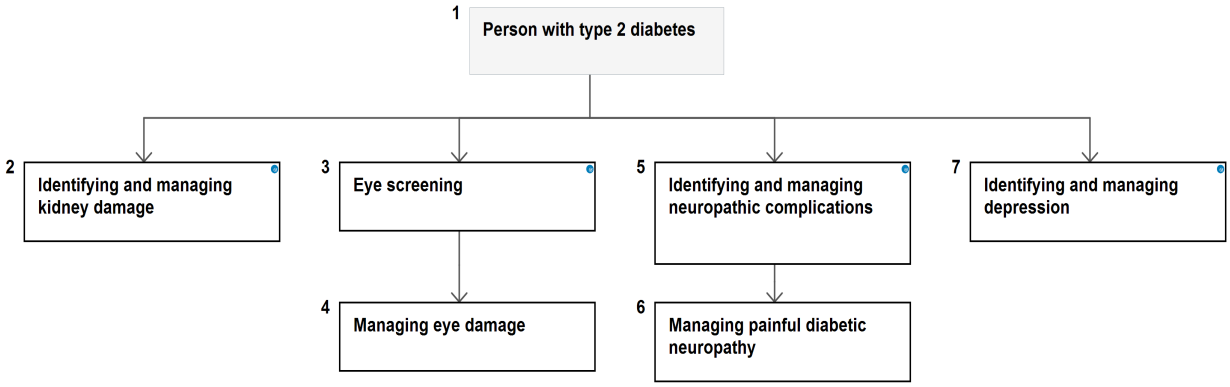
A NICE pathway brings together all NICE guidance, quality standards and materials to support implementation on a specific topic area. The pathways are interactive and designed to be used online. This pdf version gives you a single pathway diagram and uses numbering to link the boxes in the diagram to the associated recommendations.

To view the online version of this pathway visit:

http://pathways.nice.org.uk/pathways/diabetes

Pathway last updated: 10 September 2014

NICE *Pathways*



1 Person with type 2 diabetes

No additional information

2 Identifying and managing kidney damage

Annual monitoring

Annually, regardless of presence of nephropathy:

- arrange ACR estimation on first-pass urine sample (or spot sample if necessary)
- measure serum creatinine
- estimate GFR.

Further investigation

If abnormal ACR[1] (in absence of proteinuria/UTI):

- repeat test at next two clinic visits and within 3–4 months
- microalbuminuria is confirmed if at least one out of two or more results is also abnormal.

Interpretation of investigations

Suspect renal disease other than diabetic nephropathy and consider further investigation/ referral if ACR is raised and:

- no significant or progressive retinopathy, or
- BP is particularly high or resistant to treatment, or
- heavy proteinuria (ACR > 100 mg/mmol) but ACR previously documented as normal, or
- significant haematuria, or
- GFR has worsened rapidly, or
- the person is systemically ill.

Management

If diabetic nephropathy confirmed, offer ACE inhibitor with dose titration to maximum dose (unless not tolerated).

Substitute an A2RB if ACE inhibitors are poorly tolerated.

[1] Abnormal ACR = ACR > 2.5 mg/mmol for men and > 3.5 mg/mmol for women.

Maintain BP < 130/80 mmHg if abnormal ACR. For more information see the managing blood pressure section of this pathway.

Include in discussion

Significance of abnormal albumin excretion rate and trend.

If becoming pregnant is a possibility, the relative risks and benefits of ACE inhibitor so an informed decision can be made.

For more information about managing kidney damage see the chronic kidney disease pathway.

Quality standards

The following quality statement is relevant to this part of the pathway.

7. Complications

3 Eye screening

Monitoring

Arrange or perform eye screening at or around the time of diagnosis.

Use a quality-assured digital retinal photography programme with appropriately trained staff.

Repeat structured eye surveillance annually, unless findings require other action.

Perform visual acuity testing as a routine part of eye surveillance programmes.

Include in discussion

Reasons for and success of eye surveillance systems.

Before appointment for eye surveillance: advantages and disadvantages of mydriasis with tropicamide for retinal photography, and precautions for driving.

Further investigation

Emergency review by ophthalmologist for:

- sudden loss of vision
- rubeosis iridis
- pre-retinal or vitreous haemorrhage
- retinal detachment.

Rapid review by ophthalmologist for new vessel formation.

Refer to ophthalmologist if:

- there are features of maculopathy, including:
  - exudate or retinal thickening within one disc diameter of the centre of the fovea
  - circinate or group of exudates within the macula
  - any microaneurysm or haemorrhage within one disc diameter of the centre of the fovea, if associated with a best visual acuity of 6/12 or worse
- there are features of pre-proliferative retinopathy[1], including:
  - any venous beading
  - any venous loop or reduplication
  - any intraretinal microvascular abnormalities
  - multiple deep, round or blot haemorrhages
- any unexplained drop in visual acuity.

Quality standards

The following quality statement is relevant to this part of the pathway.

7. Complications

4 Managing eye damage

Ranibizumab

Ranibizumab is recommended as an option for treating visual impairment due to diabetic macular oedema only if:

- the eye has a central retinal thickness of 400 micrometres or more at the start of treatment **and**
- the manufacturer provides ranibizumab with the discount agreed in the patient access scheme revised in the context of this appraisal.

[1] If cotton wool spots are present, look carefully for the features; cotton wool spots themselves do not define pre-proliferative retinopathy.

People currently receiving ranibizumab for treating visual impairment due to diabetic macular oedema whose disease does not meet the criteria above should be able to continue treatment until they and their clinician consider it appropriate to stop.

These recommendations are from Ranibizumab for treating diabetic macular oedema (rapid review of technology appraisal guidance 237) (NICE technology appraisal guidance 274).

NICE has produced information for the public explaining the guidance on ranibizumab.

Fluocinolone acetonide intravitreal implant

Fluocinolone acetonide intravitreal implant is recommended as an option for treating chronic diabetic macular oedema that is insufficiently responsive to available therapies only if:

- the implant is to be used in an eye with an intraocular (pseudophakic) lens **and**
- the manufacturer provides fluocinolone acetonide intravitreal implant with the discount agreed in the patient access scheme.

This recommendation is from Fluocinolone acetonide intravitreal implant for treating chronic diabetic macular oedema after an inadequate response to prior therapy (rapid review of technology appraisal guidance 271) (NICE technology appraisal guidance 301).

NICE has produced information for the public explaining the guidance on fluocinolone acetonide intravitreal implant.

Resources

The following implementation tools are relevant to this part of the pathway.

Diabetic macular oedema - fluocinolone acetonide intravitreal implant: costing template

Macular oedema (diabetic) - ranibizumab (rapid review of TA237): costing template

5 Identifying and managing neuropathic complications

Gastroparesis

Consider gastroparesis in adult with:

- erratic blood glucose control, or

- unexplained gastric bloating or vomiting.

Consider trial of metoclopramide, domperidone or erythromycin for an adult with gastroparesis.

Consider referral to specialist services if:

- differential diagnosis is in doubt, or
- persistent or severe vomiting occurs.

Erectile dysfunction

Review with men annually.

Provide assessment and education for a man with erectile dysfunction to address contributory factors and treatment options.

If no contraindications, offer a phosphodiesterase-5 inhibitor.

If phosphodiesterase-5 inhibitor is ineffective, discuss next step and refer as appropriate for :

- medical treatment
- surgery
- psychological support.

Other signs of possible autonomic neuropathy

Investigate further and offer specific interventions.

Loss of warning signs of hypoglycaemia

Consider contributory sympathetic nervous system damage.

Unexplained diarrhoea, particularly at night

Consider autonomic neuropathy affecting the gut.

Unexplained bladder-emptying problems

Consider autonomic neuropathy affecting the bladder.

Foot problems

For information on preventing and managing foot problems, see the foot care for people with type 2 diabetes and foot care for inpatients with diabetes sections of this pathway.

Quality standards

The following quality statements are relevant to this part of the pathway.

7. Complications

9. At-risk foot

6 Managing painful diabetic neuropathy

Every year, formally ask about neuropathic symptoms

If present:

- discuss cause and prognosis
- agree appropriate therapeutic options and review understanding at each clinical contact
- be alert to psychological consequences and offer support appropriate to need.

Continue existing treatments for people whose neuropathic pain is already effectively managed, taking into account the need for regular clinical reviews.

When introducing a new treatment, take into account any overlap with the old treatments to avoid deterioration in pain control.

When withdrawing or switching treatment, taper the withdrawal regimen to take account of dosage and any discontinuation symptoms.

All neuropathic pain (except trigeminal neuralgia)

Offer a choice of amitriptyline, duloxetine, gabapentin or pregabalin as initial treatment for neuropathic pain (except trigeminal neuralgia)[1].

If the initial treatment is not effective or is not tolerated, offer one of the remaining 3 drugs, and consider switching again if the second and third drugs tried are also not effective or not tolerated.

[1] At the time of publication (November 2013), amitriptyline did not have a UK marketing authorisation for this indication, duloxetine is licensed for diabetic peripheral neuropathic pain only, and gabapentin is licensed for peripheral neuropathic pain only, so use for other conditions would be off-label. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the Good practice in prescribing and managing medicines and devices (2013) guidance for doctors for further information.

Consider tramadol only if acute rescue therapy is needed (see 'Treatments that should not be used' in the neuropathic pain pathway about long-term use).

Consider capsaicin cream[1] for people with localised neuropathic pain who wish to avoid, or who cannot tolerate, oral treatments.

Early clinical review

After starting or changing a treatment, carry out an early clinical review of dosage titration, tolerability and adverse effects to assess the suitability of the chosen treatment.

Regular clinical reviews

Carry out regular clinical reviews to assess and monitor the effectiveness of the treatment. Each review should include an assessment of:

- pain control
- impact on lifestyle, daily activities (including sleep disturbance) and participation[2]
- physical and psychological wellbeing
- adverse effects
- continued need for treatment.

Referral

Consider referring the person to a specialist pain service and/or a condition-specific service[3] at any stage, including at initial presentation and at the regular clinical reviews, if:

- they have severe pain **or**
- their pain significantly limits their lifestyle, daily activities (including sleep disturbance) and participation **or**
- their underlying health condition has deteriorated.

Further information

For more information on the pharmacological management of neuropathic pain in adults in non-specialist settings, see the neuropathic pain pathway.

7 Identifying and managing depression

Refer to recommendations in the depression pathway.

Quality standards

The following quality statements are relevant to this part of the pathway.

8. Psychological problems

7. Complications

[1] At the time of publication (November 2013), capsaicin cream (Axsain) had a UK marketing authorisation for post-herpetic neuralgia and painful diabetic peripheral polyneuropathy, so use for other conditions would be off-label. The summary of product characteristics states that this should only be used for painful diabetic peripheral polyneuropathy 'under the direct supervision of a hospital consultant who has access to specialist resources'. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the Good practice in prescribing and managing medicines and devices (2013) guidance for doctors for further information.

[2] The World Health Organization ICF (International Classification of Functioning, Disability and Health) (2001) defines participation as 'A person's involvement in a life situation'. It includes the following domains: learning and applying knowledge, general tasks and demands, mobility, self-care, domestic life, interpersonal interactions and relationships, major life areas, community, and social and civil life.

[3] Specialist pain services are those that provide comprehensive assessment and multi-modal management of all types of pain, including neuropathic pain. A condition-specific service is a specialist service that provides treatment for the underlying health condition that is causing neuropathic pain. Examples include neurology, diabetology and oncology services.

Glossary

Sources

Neuropathic pain - pharmacological management. NICE clinical guideline 173 (2013)

Type 2 diabetes - newer agents (partial update of CG66). NICE clinical guideline 87 (2009)

Fluocinolone acetonide intravitreal implant for treating chronic diabetic macular oedema after an inadequate response to prior therapy (rapid review of technology appraisal guidance 271). NICE technology appraisal guidance 301 (2013)

Ranibizumab for treating diabetic macular oedema (rapid review of technology appraisal guidance 237). NICE technology appraisal guidance 274 (2013)

Your responsibility

The guidance in this pathway represents the view of NICE, which was arrived at after careful consideration of the evidence available. Those working in the NHS, local authorities, the wider public, voluntary and community sectors and the private sector should take it into account when carrying out their professional, managerial or voluntary duties. Implementation of this guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guidance, in their local context, in light of their duties to avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in this guidance should be interpreted in a way which would be inconsistent with compliance with those duties.

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