

Clinical skills

How to ... Examine an eye

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Rationale

This article is written to help nurses to perform a systematic external examination of the eye with the minimum of equipment....The eye is a scary place for many nurses, but almost all of our patients have two so we all need to have at least a broad knowledge of how to examine them

- 6-8% of presentations to emergency departments are eye problems. A similar proportion present to primary care
- The skill of eye assessment needs few elements of equipment
- Nurses need to be able to assess the integrity of the eye and decide whether further, specialist assessment is needed

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Preparation and equipment

- A source of light, a bright pen torch or ophthalmoscope
 - Magnification if possible
 - Cotton bud or cotton tipped applicator
- For a comprehensive eye exam
- Fluorescein eye drops or impregnated strip
 - Topical anaesthetic drops
- Knowledge of normal anatomy

Procedure

1. At all points it is useful to compare one eye with the other. Never examine just one
2. Be systematic – start by looking at the eyes...within the context of the face. Are they symmetrical? Does everything look grossly 'normal'
3. Ask the patient to follow the light with their eyes. Move the light source up, down, to both sides and into all four corners and look at how the eyes are moving. Ask the patient whether they can see one light at all times or if there are any points where they can see two. Note this down
4. If the distance from the eyebrow to the horizontal crease in the lid the same on both sides? Similarly, is the distance from the lid crease to the lid margin the same on both eyes?
5. Look at the eyelids; are the lid margins smooth, are all the lashes there and pointing in the right direction? Does the punctum (the little drainage hole at the medial area of the lid rest on the eyeball (globe)
6. Do the lids move? ask the patient to close their eyes and open again. Is closure symmetrical? is any of the eye still visible when the eye closes?
7. Are there any lumps and bumps that are extra to the normal anatomy of the lids?
8. Examine the conjunctiva, colour ; is it a 'red eye' or a 'white eye'?
9. Any red patches, of blood or of extra redness
10. Is it smooth or bumpy, in one place, or everywhere?
11. Is there any discharge? Colour? Type?
12. Any foreign bodies?
13. Evert the eyelid and have another look at the conjunctiva there taking into account what you've been looking at already, if there is a foreign body, it will wipe off easily and painlessly
14. the cornea should be smooth in all dimensions and completely clear. Can you see the iris and pupil in full detail through the cornea? Is the surface of the eye smooth?
15. If you have fluorescein available, is there any staining of any tissue
16. Is there anything on the cornea that is not the same as the other eye? Foreign bodies? Ulcers?
17. Use the light source to shine a light from the side of the cornea. It should be curved and you should see a curved light on the cornea and a straight light on the iris. Is the distance between these lines of light the same on each eye?
18. Shine a light on the pupil. It should constrict (direct pupil response) Shine a light on the pupil again while looking at the pupil in the other eye. It should constrict as well (consensual response) swing the light from one pupil and the other, pausing on each pupil for a second or 2 in turn and noting what happens
19. If there is any pain, the type, location, severity and if it is constant or intermittent
20. Note all your findings throughout your examination ensuring that you note which eye you are talking about. Draw diagrams to illustrate your findings. If anything is asymmetrical or looks abnormal, first ask the patient about what is normal for them and then, if you are at all worried, refer the patient for expert evaluation.

Evidence base

'Eyes' are something that worry many nurses and a similar proportions of our medical colleagues. There is little in pre registration education about them but we know that they are quite small and rather complicated. We are also very aware that without them, or the sight that they allow us to have, life would be much more difficult. Patients are in the same position so, if anything seems amiss, they are likely to be worried, as are those nurse is who lack confidence in what they are looking at and what to do about it. The cornea, the clear 'window of the eye' contains many nerve cells underneath the layers of epithelium. These have a protective function, telling us very loudly, if they are exposed, that we have a problem.

It is commonly heard from nurses that they 'do not do eyes'. If this were any other system of the body, we would be horrified but this statement often provokes agreement! The eye is complex, but fascinating. It is the only organ we can see inside without invasive techniques. We can see blood vessels working (without loss of blood!) and visualise the internal tissues making up a part of the body.

A knowledge of the normal anatomy, particularly the external anatomy of the eye is key to understanding what is normal and therefore what it not. Examining the eye takes a minimum of equipment and we have another one to compare with, to try to work out what is normal and what is disordered and , because these parts of the body are generally completely visible, we have the patients input to let us know what is normal for them. Using a systematic process for examination means that when the nurse internalises the process, it will be used every time and no steps will be missed out, so no abnormalities will be missed (Marsden 1998).

Literature

<p>References [10-15 max]</p> <p>Marsden, J (1998) Systematic Eye Examination in A&E <i>Emergency Nurse</i> 6,6. 16-19</p>	<p>Further reading and useful links [5 max]</p> <p>Marsden J (2002) Ophthalmic Trauma in the Emergency Department <i>Accident and Emergency Nursing</i> 10,3 136-142</p> <p><i>Shaw M Lee A Stollery R (2010) Ophthalmic Nursing. Wiley Blackwell Chichester</i></p> <p>Marsden, J (2006) Ophthalmic Care John Wiley, Chichester.</p> <p>http://www.aci.health.nsw.gov.au/_data/assets/pdf_file/0010/154963/eem_education_session2.pdf</p> <p>Marsden J (1998) Systematic Eye Examination in A&E <i>Emergency Nurse</i> 6,6. 16-19</p>
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Reflective activity

1. What further knowledge and skills do you need in order to be able to explain to your patient what might be happening when they have an eye problem?
2. How will you go about gaining this knowledge?