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Choroidal Naevus of the eye

What is this?

These are benign choroidal melanoma, referred to clinically as a choroidal nevus. They are just like the freckles you get on the skin and just like these are more common as one gets older. Around 2% of population have them commoner in whites 4% and less common in blacks 0.7%.

They appear as a flat or slightly elevated slate gray lesion at the back of the eye where the retina or seeing part of the eye is.

Fortunately they virtually never occur in the centre of the vision or the Macular area and thus never cause any interference with vision.

The margins are typically indistinct, and often there are overlying areas of drusen noted within the nevus. In most instances, choroidal nevi remain under two disc diameters (DD) in size (about 3mm) , although they may attain sizes of up to 5 DD (7mm in some cases)

The only concern is if they grown and turn into a choroidal melanoma. They do this only very rarely but should be examined annually, with a photograph if possible, to ensure that any change is detected early.

Risk factors include:
Light coloured iris – blue or grey
Fair skin and propensity to easily sun burn
Naevi and freckles on the skin

Distinguishing features between naevi and melanomas. Choroidal nevi tend to have clearly defined margins and to be flat or slightly elevated, and they remain stable in size. Over time, choroidal nevi display features such as overlying drusen as well as retinal pigment epithelial atrophy, hyperplasia or fibrous metaplasia.

In contrast, choroidal melanomas are more likely to show signs of activity such as relatively indiscrete margins, irregular or oblong configuration, overlying subretinal fluid and orange pigment, and abruptly elevated edges.

I have personally only seen two such case in my career. Studies vary in the risks one study quotes one case in over 8000 naevi, others quote 0.7% in the elderly, others as high as 10% over 10 years. However there are risk factors we look for.

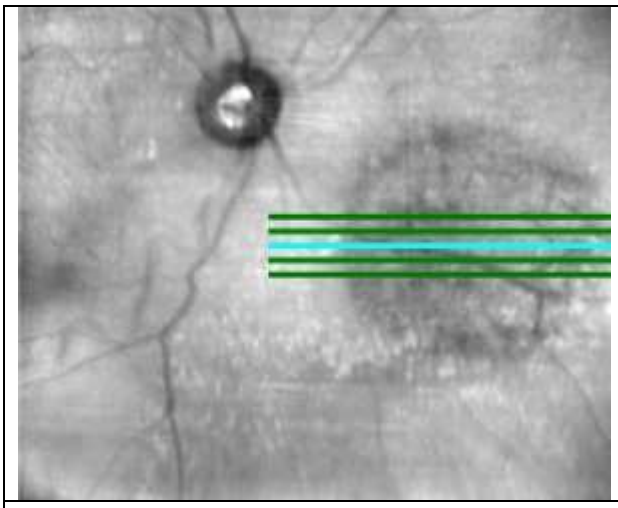
Naevi thickness > 2mm
Naevi close to the optic disc <3mm

Ultrasonaographic hollowness
Absent halo around the naevus
Subretinal fluid over the naevus on Optical Coherence Tomography.
Orange pigment

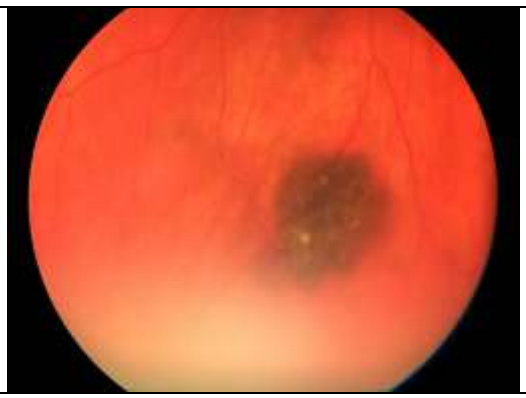
An annual review is key. – Optometrist or Ophthalmologist with Annual Photographs.

Symptoms of change or growth are usually a shadow coming over the vision, or possibly an increase in floaters.

I think one of the best ways to monitor progress and assess the risk is with photography and Optical Coherence Tomography. Here one can accurately measure the size and height. This is an example of a large Naevus 5mm but only 0.2mm in height.



To the left is another typical choroidal naevus with drusen present.



Follow up depends on risk factors and can range from annual follow up or follow up by Ophthalmic Optician with fundal photograph to those with a risk factor or high risk to 4 months for the 2nd visit, 6 months for the 3rd, 6 months for the 4th, 9 months for the 5th and annually thereafter.

"TFSOM" (To Find Small Ocular Melanoma)

The risk of a choroidal nevus (a benign pigmented lesion in the eye) developing into a choroidal melanoma is generally assessed using various clinical factors. The most well-known and widely used system for this is the mnemonic "TFSOM" (To Find Small Ocular Melanoma), which was developed based on clinical research. This system assigns a score to each risk factor, and the total score helps in estimating the likelihood of a choroidal nevus transforming into melanoma. Here's a breakdown:

1. Thickness:
   - Greater than 2 mm: 2 points.

2. Fluid:
   - Subretinal fluid present: 2 points.

3. Symptoms:
   - Symptoms (like visual changes) present: 1 point.

4. Orange Pigment:
   - Presence of orange pigment on the nevus: 1 point.

5. Margin:
   - Margin within 3 mm of the optic disc: 1 point.

Based on the total score, the risk can be categorised as follows:
- 0 points: Low risk (approximately 3% risk of growth into melanoma at 5 years).
- 1-2 points: Intermediate risk (approximately 38% risk at 5 years).
- 3-5 points: High risk (approximately 50% risk at 5 years).

It's important to note that these scores and associated risks are general estimates. The actual risk for any individual patient can vary, and it's crucial for anyone with a choroidal nevus to have regular eye examinations and follow-ups with an ophthalmologist or a retina specialist. These professionals can provide a more personalised assessment based on the specific characteristics of the nevus and the patient's overall eye health.

Nicholas Lee 2024