



“POSTERIOR SUB CAPSULAR CATARACT WITH BULKING AGENT USE IN YOUNG MALES.”

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ABSTRACT Fitness and aesthetics industry has seen a fine boom in the last two to three decades. More and more people are awakening to taking care of their health, both for their inner peace as well as outer looks. There has been an increased focus on the aesthetics and with the advent of social media and e-commerce companies, there is an easy availability of food and supplements which are suggested for the same. However, the consumer needs to be aware of the source and authenticity of the products being consumed and take it responsibly. Here, we present a case series of three young males between the age group of 20-30 years who presented to us with a black dot appearing in front of their eyes. On examination, all three were found to have a posterior sub capsular cataract as the only positive finding. They had no other significant history apart from the fact, that they had consumed a bulking or a mass gaining or a weight gaining supplement at some point in their lives. All three of them were unaware of the source, the brand or the side effects of any of the ingredients. They had consumed either on the advice of, a well meaning but themselves unaware acquaintances, or through some online platforms' guidance and no proper guidance or a coach for the same. We intend to highlight the importance of consuming any such product with caution and under the monitoring of a trained professional and a doctor. This particular case series was however limited by the fact that none of these patients were consuming these products at the time of presentation so we couldn't find the exact product and hence had to rely on the patient's history. At no point do we intend to malign or condemn health supplements. Instead we want to emphasise on the authenticity and contents of the products and a guidance on the duration of consumption of the same and a further study with a higher sample size and a specificity of the consumed product would be needed to further validate this result.

KEYWORDS :

INTRODUCTION:

Posterior subcapsular cataracts, are known to have numerous causes, one of them being prolonged steroid usage. Here we present a case series of 3 patients between the ages of 20-30 who presented to us with a complaint of a central black spot or shadow coming in front of both the eyes since a few months. On taking a detailed history, they didn't have any known etiology. A complete ophthalmology workup including best corrected visual acuity, anterior segment examination and detailed posterior segment examination was done. The BCVA was 6/9 in first and third case in both eyes and 6/9 in RE and 6/12 in LE in the second case. All three of them were found to have a posterior sub capsular cataract as the only diagnosis. No other abnormality was found on fundus examination. No other etiological cause, including family history or history of metabolic disease or any long term drug usage was found. However, they gave a history of using a bulking agent for a certain duration. On being asked about the source, the patients did not have an authentic source of the bulking agent and didn't seem informed about the dosage and the brands of the same.

Since over the counter supplements are used by a lot of gym going people for bulking purposes, there could be a possibility of some of them containing steroids in some amount, for giving customer satisfying results.

At no point do we intend to say that a specific agent or any specific brand of such an agent per se is the cause for the cataract observed, but to stress upon the importance of finding a standard and authentic source of any supplement being taken and remaining informed and aware of the possible side effects in the long run.

CASE SERIES:

CASE 1: 22 year old male came to the ophthalmology OPD with a chief complaint of black spots in front of both eyes since 3 months. He had no other ocular or systemic complaints. There was no history of (h/o) spectacle use. There was no h/o any past ocular complaints. The patient did not have any significant family history. He gave a h/o taking a bulking agent since 3 years. There was no h/o taking any other supplement. On examination, best corrected visual acuity was 6/9 in both eyes. Color vision and Amsler's test was normal in both eyes. On slit lamp examination rest of the anterior segment was within normal limits(WNL) but on dilated examination, a well defined (PSC) cataract was seen in both eyes(Image 1 and 2). Dilated fundus examination was WNL in both eyes.

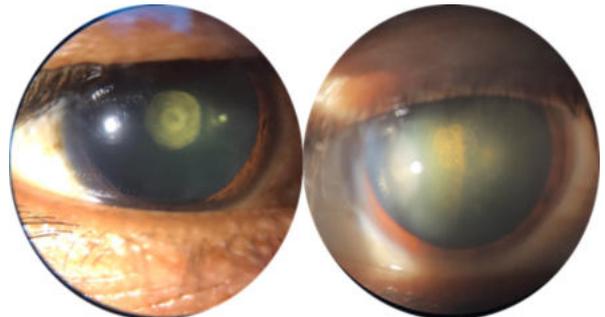


Image 1: Case 1- Right eye

Image 2: Case 1- Left eye

CASE 2: 30 year old male came with a chief complaint of diminution of vision in both eyes, which was gradual, progressive and painless, and glare at night while driving, since 6 months. The patient had no past ocular complaints and there was no h/o spectacle use or of trauma. There was no significant family history or h/o any systemic illness. There was a h/o taking a bulking agent on and off since 7-8 years. There was also a h/o taking some supplement for weight gain for 6 months, 5 years back, details of which he didn't know. On examination, best corrected visual acuity was 6/9 in the RE and 6/12 in the LE. Color vision and Amsler's test was WNL. On slit lamp examination, anterior segment showed a posterior sub capsular cataract in both eyes (Image 3 and 4). Dilated Fundus examination was WNL for both eyes.

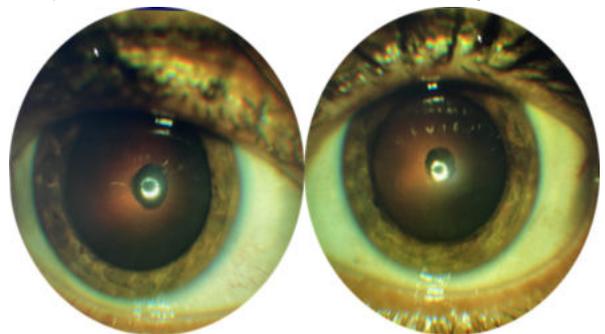


Image 3: Case 2- Right eye

Image 4: Case 2- Left eye

CASE 3: 25 year old male came with a chief c/o diminution of vision in both eyes since 6 months, which was gradual progressive and painless. There was no h/o past ocular complaints. No h/o any systemic disorder and no h/o spectacle use. There was no significant family history. However, in this case again, there was a history of taking a supplement for weight and mass gain. On examination, BCVA was 6/9 in both eyes. Color vision and Amsler's test was WNL. On slit lamp examination, anterior segment showed a central PSC. Rest of the anterior segment was WNL. Dilated fundus examination was WNL.

DISCUSSION:

Long term Steroid use topical as well as systemic is known to be associated with posterior sub capsular cataracts. Their association has been found only with steroids possessing glucocorticoid activity. Although the mechanism of steroid induced cataract is not known well, glucocorticoid induced gene transcription events in lens epithelial cells and also other intraocular and systemic cells, most likely interact to generate steroid cataracts^[1] Glucocorticoids have been known to cause weight change in patients. Usually used for anti-inflammatory purposes in medicine, weight gain is a side effect associated with it. A study done of patients with Wegener's granulomatosis, receiving high dose GCs for one month, followed by tapering over a period of 6 months of randomisation, showed a 4.4% increase from the baseline weight^[2] However, there has been increasing inadvertent use of anabolic steroids in the fitness and athletics industry. A study conducted observed that about 3.9% of men reported a lifetime use of Androgenic Anabolic steroids.^[3] Performance enhancing substances use by athletes is nearly as old as the sport itself. Although steroids are available via physician's prescription, nutritional supplements are widely available to people, with minor regulation. The purpose of both steroids as well as nutritional supplements is to increase the testosterone levels in the body to increase lean muscle mass.^[4] There are good and authentic resources available for the same. However, we aim to emphasise the importance of cautious use, under a trained professional and a doctor, of any such substance and not self administration without checking the contents and their effects.

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