

Case 1 MCQ Questions

Please refer to both the case and the required reading to help you in answering these questions

Question 1

When was SLT first approved by the FDA as a glaucoma treatment in the USA?

- A) 1984
- B) 1991
- C) 1997
- D) 2001**
- E) 2008

Question 1 correct answer: D

Question 2

What is the spot size for SLT treatment?

- A) 100 μm
- B) 250 μm
- C) 400 μm**
- D) 700 μm
- E) 1000 μm

Question 2 correct answer: C

Question 3

Argon laser trabeculoplasty uses less energy than SLT

True or **False**

Question 3 correct answer: False

Question 4

Regarding the mechanism of SLT, which of the following is TRUE?

- A) SLT increases the outflow of aqueous via the trabecular meshwork**
- B) SLT reduces the production of aqueous humour

- C) SLT reduces cytokine release
- D) SLT increases aqueous outflow via the uveoscleral pathway
- E) 250 laser burns are required in order for the treatment to be effective

Question 4 correct answer: A

Question 5

Which of the following is not a common symptom reported by patients following SLT treatment?

- A) Redness
- B) Change in colour perception**
- C) Light sensitivity
- D) Blurred vision
- E) Ocular discomfort

Question 5 correct answer: B

Question 6

Regarding the adverse effects of SLT, which of the following is FALSE?

- A) IOP spikes of >5 mmHg occur in approximately 50% of patients immediately following treatment**
- B) A heavily pigmented trabecular meshwork is a risk factor for post-SLT inflammation
- C) Intraocular inflammation occurs in around 90% of treated eyes
- D) Intraocular inflammation generally resolves within five days of treatment
- E) Adverse effects following SLT are usually mild and self-limiting

Question 6 correct answer: A

Question 7

Which of the following is the greatest predictor of early SLT success?

- A) Female gender
- B) Number of concomitant topical medications
- C) Higher central corneal thickness
- D) Lower SLT power used
- E) Higher baseline IOP**

Question 7 correct answer: E

Question 8

Which of the following statements is FALSE?

- A) A significant number of IOP peaks occur outside of office hours
- B) The water drinking test can provide an estimate of IOP spikes, without requiring 24-hour IOP monitoring
- C) Patients with higher WDT peaks have been found to be more likely to have progressive glaucoma
- D) The water drinking test involves drinking 500 ml of water and measuring IOP with every 5 minutes for half an hour**
- E) Larger IOP fluctuations are a risk factor for glaucoma progression

Question 8 correct answer: D

Question 9

In the study by Kerr and colleagues, they found that baseline and WDT peak IOP were reduced in patients who had undergone SLT treatment

True or False

Question 9 correct answer: True

Question 10

Regarding SLT as a treatment for patients with secondary glaucoma or ocular hypertension, which of the following is TRUE?

- A) SLT is not used as a treatment in patients with steroid-induced glaucoma
- B) Patients with pseudoexfoliative glaucoma have smaller reductions in IOP from baseline, compared to patients with POAG
- C) The average time to treatment failure following SLT treatment in a study of patients with pigmentary glaucoma was 27.4 months**
- D) Treatment failure is defined as requiring surgical intervention for glaucoma management
- E) There are a number of large clinical trials investigating the efficacy of SLT as a treatment in secondary glaucoma and ocular hypertension

Question 10 correct answer: C

Question 11

SLT can safely be repeated

True or False

Question 11 correct answer: True

Question 12

Which type of laser is used for SLT?

- A) Cyclodiode laser
- B) Semiconductor laser
- C) Iridex IQ810 laser
- D) Carbon dioxide laser
- E) **Nd:YAG laser**

Question 12 correct answer: E

Question 13

Why is extra caution required when using selective laser trabeculoplasty to treat patients with pigmentary glaucoma?

- A) The posterior bowing of the iris may limit the visibility of the trabecular meshwork
- B) Apraclonidine eye drops are contraindicated in these patients, leading to an acute spike in IOP following treatment
- C) The increased pigmentation of the trabecular meshwork in these patients makes the procedure more technically challenging for the ophthalmologist
- D) Presenting IOP tends to be lower in patients with pigmentary glaucoma
- E) **Patients with pigmentary glaucoma may be more likely to experience IOP spikes following SLT treatment**

Question 13 correct answer: E

Question 14

Two baseline OCT RNFL scans taken close together assist with better tracking of future RNFL loss

TRUE or FALSE

Question 14 correct answer: True

Question 15

Which of the following statements regarding the SITA-Faster 24-2 C Testing algorithm is FALSE?

- a) There are 10 additional testing points in the central visual field
- b) The test takes approximately half the time of a SITA-Standard 24-2
- c) The central test points are asymmetrically distributed
- d) The SITA-Faster 24-2 C can be used interchangeably with the SITA-Fast and SITA standard**
- e) The Glaucoma Hemifield test is available as part of analysis

Question 15 correct answer: D

Question 16: What is the energy used per pulse in SLT?

- a) 0.6-1.0 mJ**
- b) 3-7 mJ
- c) 20-25 mJ
- d) 60-100 mJ
- e) 150-200 mJ

Question 16 correct answer: A

The following questions are based on the LiGHT study: **Selective laser trabeculoplasty versus eye drops for first-line treatment of ocular hypertension and glaucoma (LiGHT): a multicentre randomised controlled trial** by Gazzard *et al*, 2019.

Question 17

What is the approximate prevalence of glaucoma in adults aged 40 or over?

- A) 0.1%
- B) 0.5%
- C) 2.0%**
- D) 3.7%
- E) 5.9%

Question 17 correct answer: C

Question 18

What percentage of patients undergoing SLT experienced an IOP spike of >5 mmHg post-procedure?

- A) 0.2%
- B) 1.7%**
- C) 3.9%
- D) 4.2%
- E) 6.1%

Question 18 correct answer: B

Question 19

In the LiGHT study, patients with severe open angle glaucoma were more likely to have IOP at or below target at 36 months

True or **False**

Question 19 correct answer: False

Question 20

What was the primary outcome measure in the LiGHT study?

- A) IOP lowering effect of SLT vs. eye drops
- B) Visual field progression
- C) OCT RNFL thickness
- D) Health-related quality of life**
- E) SLT safety

Question 20 correct answer: D

Question 21

Refer to table 5. Which of the following statements is FALSE?

- A) More patients in the Eye Drops group required trabeculectomy surgery during the trial
- B) A larger number of eyes met the criteria for treatment escalation in the SLT group than in the Eye Drops group**
- C) There was no clinical difference in visual acuity between the two groups
- D) There were more patients in the Eye Drops group that showed evidence of glaucoma progression during the trial

- E) Patients treated with SLT required fewer clinic visits than those in the Eye Drops group

Question 21 correct answer: B

Question 22

Which of the following is associated with long-term and multiple use of topical anti-glaucoma medications?

- a) Systemic side effects
- b) Reduced patient adherence to treatment plan
- c) Ocular adverse effects
- d) Increased risk of future surgical failure
- e) **All of the above**

Question 22 correct answer: E

Question 23

Regarding SLT, which of the following is FALSE?

- a) SLT is thought to provide better control of diurnal IOP fluctuations compared with episodic medication administration
- b) SLT is associated with fewer adverse effects compared with ALT
- c) **SLT is more effective at controlling disease progression in patients with severe glaucomatous visual field loss**
- d) In the LiGHT study, treatment with SLT was associated with a lower rate of cataract surgery during the study
- e) SLT is considered to be a cost-effective treatment for glaucoma and ocular hypertension in the United Kingdom NHS

Question 23 correct answer: C

Question 24

In the LiGHT Study, what percentage of patients had an IOP spike of > 5mmHg from baseline at their 2-week follow-up assessment?

- a) **0%**
- b) 0.5%
- c) 1.2%
- d) 2.2%
- e) 3%

Question 24 correct answer: A

Question 25

In the LiGHT Study, among patients undergoing repeat SLT during the study, what was the mean IOP reduction (from pre-treatment) at 18- months post-repeat SLT?

- a) 2.1 mmHg
- b) 2.9 mmHg
- c) 3.8 mmHg**
- d) 4.6 mmHg
- e) 5.8 mmHg

Question 25 correct answer: C