4.8 The Biological Approach to OCD: Genes, Neural Explanations and Drug Therapy: 10-minute Pack

AQA 7182 · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions.

1 Outline role of candidate genes COMT and SERT in OCD vulnerability.

(Total for Question 1 is 4 marks)

2 Explain why SNRIs or tricyclics may be used when SSRIs are insufficient.

(Total for Question 2 is 4 marks)

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Mark scheme · 4.8 The Biological Approach to OCD: Genes, Neural Explanations and Drug Therapy: 10-minute Pack

Question 1

names COMT and SERT as candidate genes associated with OCD vulnerability oe	**M1**
states COMT is involved in dopamine regulation or breakdown in the prefrontal cortex oe	**M1**
states SERT (serotonin transporter) affects serotonin reuptake, influencing serotonin availability oe	**M1**
links gene function to vulnerability, for example altered neurotransmitter regulation may increase risk of OCD symptoms oe	**M1**

Answer: COMT and SERT are candidate genes linked to OCD. COMT affects dopamine breakdown in the prefrontal cortex and variants may alter dopamine regulation. SERT codes for the serotonin transporter that reuptakes serotonin; variants may change serotonin availability. Such changes in neurotransmitter regulation are proposed to increase vulnerability to OCD.

Question 2

states SNRIs increase both serotonin and norepinephrine, and tricyclics like clomipramine affect serotonin as well as other neurotransmitters oe	**M1**
explains rationale: broader neurochemical effects can help patients who do not respond to serotonin-only drugs oe	**A1**
notes clomipramine is particularly effective in some cases of OCD and so used when SSRIs fail oe	**M1**
may mention trade-off: these alternatives often have more side effects, so clinicians weigh benefits and risks oe	**A1**

Answer: SNRIs increase both serotonin and norepinephrine, and tricyclics such as clomipramine affect serotonin and other transmitters. These broader effects can be effective for patients who do not respond to SSRIs alone. Clomipramine has evidence of efficacy for OCD but tends to have more side effects, so clinicians consider benefit versus risk when using it or combining drugs.

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