



Trigger(s)
 • Trauma
 • Stress
 • Infection
 • Unknown

C1-INH therapy regulates multiple pathways

Tranexamic acid inhibits plasmin

Feedback Loop
 K activates FXII → FXIIa

Lanadelumab and berotralstat inhibit K

K cleaves HMWK, releasing BK

Icatibant inhibits BK by binding to B2 receptors

HAE diagnosis based on
 • C1-INH level
 • C1-INH function
 • C4 level

ABBREVIATIONS	
BK	Bradykinin
C1-INH	C1 inhibitor
C#	Complement component
FXII	Coagulation factor XII
FXIIa	Activated FXII
FXIIif	Fragment of FXIIa
HAE	Hereditary angioedema
HMWK	High-molecular-weight kininogen
K	Kallikrein
MASP	MBL-associated serine protease
MBL	Mannose-binding lectin
PK	Prekallikrein
tPA	Tissue plasminogen activator
uPA	Urokinase plasminogen activator

Vascular Leakage (Edema)

The Importance of C1-INH for HAE¹⁻⁹

Created in partnership
with Dr. Allen Kaplan

Complement System

- Participates in the elimination of invading microorganisms¹⁷
- Low C1-INH levels fail to block MASP-1 from cleaving HMWK, which may augment bradykinin production¹⁸
- Low levels of C1-INH lead to activation and consumption of C4 and C2 during acute HAE attacks¹⁹

Contact Activation System

- Represents a group of plasma proteins that promote inflammation upon activation²⁰
- Low C1-INH levels fail to block FXIIa and Kallikrein, leading to an increase in bradykinin production¹⁹

Fibrinolysis System

- Regulates the dissolution of clots as wounds heal by degrading fibrin, the netting that clots blood²¹
- Plasmin activates FXII to FXIIa (and FXII_f)⁷

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