Clinical trials of antithrombotics for acute coronary syndrome in all type of patients

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1 direct thrombin inhibitor

Trial	Treatments	Patients	Trials design and methods
bivalirudin vs eptifibatide + heparin			
PROTECT-TIMI 30 , 2006 [NCT00250471] n=284/573 follow-up: hospital stay	bivalirudin alone versus eptifibatide plus either unfractionated heparin or enoxaparin	non ST elevation ACS patients undergoing PCI	Parallel groups open International
Argatroban vs heparin			
ARGAMI-2 , 1998 n=NA follow-up: 30 days	Argatroban 6020 mg/kg bolus; 24 g /kg/min infusion for 72h versus UFH 5000 IU bolus; 1000 IU/h infusion	AMI	
bivalirudin vs heparin			
HERO , 1997 n=272/140 follow-up: 35 days	Bivalirudin 0.1250.250 mg/kg bolus; 0.1250.500 mg /kg/min infusion for 72h versus UFH 5000 IU bolus; 10001200 IU/h infusion	AMI (patients presenting within 12 hours with ST-segment elevation)	Parallel groups double blind
BAT (Bittl) , 1995 n=2059/2039 follow-up: 6 months	Bivalirudin 1.0 mg/kg bolus; 2.5 mg /kg/h for 4 h, then 0.2 mg /kg/h infusion for 24h versus UFH 175 IU/kg bolus; 15 IU mg /kg/h infusion	patients undergoing angioplasty for unstable or postinfarction angina	Parallel groups double blind North America and Europe
Efegatran vs heparin			
Klootwijk , 1999 n=432 follow-up: 30 days	Efegatran 0.10.3 mg/kg bolus; 0.1051.200 mg /kg/h infusion for 48h versus UFH 5000 IU bolus; 1000 IU/h infusion	patients with unstable angina	Parallel groups open
Hirudin vs heparin			
OASIS , 1997 n=538/371 follow-up: 7 days	low-dose hirudin (0.2 mg/kg bolus+0.10 mg/kg/h infusion) or medium-dose hirudin (0.4 mg/kg bolus+0.15 mg/kg/h infusion) for 72h versus heparin 5000 IU bolus+1000 to 1200 U/h	patients with unstable angina or suspected acute MI without ST-segment elevation	Parallel groups open

continued...

Trial	Treatments	Patients	Trials design and methods
HIT-4 , 1999 n=447 follow-up: 30 days	Hirudin 0.2 mg/kg bolus; 0.5 mg/kg twice daily 0.1 mg/kg 0.1 mg /kg/h infusion for 5-7 days versus Placebo bolus, UFH 12 500 IU twice daily	patients with AMI <=6 h were treated with aspirin and streptokinase	Parallel groups double blind
TIMI 9B , 1996 n=3002 follow-up: 30 days	Hirudin 0.1 mg/kg bolus; 0.1 mg /kg/h infusion for 96h versus UFH 5000 IU bolus; 1000 IU/h infusion	Unstable angina or AMI	Parallel groups open
GUSTO IIB , 1996 n=12142 follow-up: 30days (1 year)	Hirudin 0.1 mg/kg bolus; 0.1 mg /kg/h infusion for 72h versus UFH 5000 IU bolus; 1000 IU/h infusion for 72H	patients with acute coronary syndromes	Parallel groups open
OASIS pilot , 1997 n=909 follow-up: 6 months	Hirudin 0.20.4 mg/kg bolus; 0.100.15 mg /kg/h infusion for 72h versus UFH 5000 IU bolus; 10001200 IU/h infusion	patients with unstable angina or suspected acute MI without ST-segment elevation	Parallel groups open
OASIS 2 , 1999 n=5083/5058 follow-up: 7 days (6 months)	Hirudin 0.4 mg/kg bolus; 0.15 mg /kg/h infusion for 72h versus UFH 5000 IU bolus; 15 IU /kg/h infusion	patients with unstable angina or suspected acute myocardial infarction without ST elevation	Parallel groups double blind
HELVETICA (Serruys) , 1995 n=1141 follow-up: 6 months	Hirudin 40 mg intravenous bolus; 0.2 mg /kg/h infusion for 24 h, then 40 mg or placebo twice daily for 72h versus UFH 10 000 IU bolus; 15 IU /kg/h infusion for 24 h, then placebo twice daily	patients with unstable angina who were scheduled for angioplasty	Parallel groups double blind
Inogatran vs heparin			
TRIM , 1997 n=1209 follow-up: 30 days	Inogatran 0.15.5 mg bolus; 2.010.0 mg/h infusion for 72h versus UFH 5000 IU bolus; 1200 IU/h infusion	patients with suspected unstable angina, or non-Q wave myocardial infarction	Parallel groups double blind

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2 long term LMWH

Trial	Treatments	Patients	Trials design and methods
dalteparin vs placebo (on top of aspirin)			
FRIC prolonged treatment phase (LWMH vs PBO) , 1997 n=731/751 follow-up: 45 days	dalteparin SC 120 i.u./kg twice-daily for 6 days followed by dalteparin 7500UI daily up to day 45 (+aspirin) versus unfractionated heparin dose-adjusted intravenous infusion (for at least 48h) then by subcutaneous injection up to day 6 (then placebo) (+aspirin)	Patients with unstable angina or non-Q-wave myocardial infarction	Parallel groups double blind
FRISC (long term) , 1996 n=746/760 follow-up: 40 days	dalteparin SC 120 IU per kg bodyweight [maximum 10 000 IU] twice daily for 6 days with 7500 IU once daily for 34-45 days +aspirin versus matched placebo + aspirin	patients with unstable CAD (unstable angina or non-Q-wave myocardial infarction) within the previous 72 hours	Parallel groups double blind Sweden
FRISC (short term) , 1996 n=746/760 follow-up: 6 days	dalteparin SC 120 IU per kg bodyweight [maximum 10 000 IU] twice daily for 6 days with 7500 IU once daily for 34-45 days +aspirin versus matched placebo + aspirin	patients with unstable CAD (unstable angina or non-Q-wave myocardial infarction) within the previous 72 hours	double blind Sweden
enoxaparin vs UFH (on top of aspirin)			
ESSENCE , 1997 n=1607/1564 follow-up: 14 days (30 days)	enoxaparin 1mg/kg, twice daily during 48h-8days versus continuous intravenous unfractionated heparin	patients with angina at rest or nonQ-wave myocardial infarction	Parallel groups Double blind United states, Canada, South America, Europe
INTERACT , 2006 n=380/366 follow-up: 30 days (2.5y)	enoxaparin (1 mg/kg subcutaneously twice daily) for 48 hours (+eptifibatide and aspirin) versus intravenous UFH (70 U/kg bolus followed by 15 U/kg per hour adjusted to an activated partial thromboplastin time of 1.5-2 times control) for 48 hours (+eptifibatide and aspirin)	high-risk patients with ACS receiving aspirin and eptifibatide	Parallel groups open Canada
SYNERGY , 2005 [NCT00043784] n=4993/4985 follow-up: 30 days	Enoxaparin 1 mg/kg twice daily versus unfractionated heparin	high-risk patients with acute coronary syndromes	Parallel groups open 12 countries
TIMI 11 B (long term) , 1998 n=1953/1957 follow-up: 43 days	enoxaprin during both the acute phase (IV) and outpatient phase (SC) versus intravenous UFH for >=3 days (followed by subcutaneous placebo injections)	unstable angina/nonQ-wave myocardial infarction	double blind North America, South America,

continued...

Trial	Treatments	Patients	Trials design and methods
TIMI 11 B (short term) , 1998 n=1953/1957 follow-up: 8 days (43 days)	enoxaprin during both the acute phase and outpatient phase versus intravenous UFH for >=3 days (followed by subcutaneous placebo injections)	unstable angina/nonQ-wave myocardial infarction	Parallel groups double blind North America, South America,
nadroparin vs UFH (on top of aspirin)			
FRAXIS (14 days) , 1998 n=1151/1151 follow-up: 14 days	nadroparin for 14 days versus unfractionated heparin for 14 days	unstable angina or non-Q wave myocardial infraction	double blind 17 countries
FRAXIS (6days) , 1998 n=1166/1151 follow-up: 14 days	nadroparin for 6 days (+aspirin) versus unfractionated heparin for 6 days (+aspirin)	unstable angina or non-Q wave myocardial infraction	Parallel groups Double blind 17 countries

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3 oral anticoagulant

Trial	Treatments	Patients	Trials design and methods
coumadin vs control (on top of aspirin)			
ASPECT-2 (coumadin+asp vs asp) , 2002 n=333/336 follow-up: 1 year	coumadin(INR mean 2.4) +aspirin versus aspirin	UA, AMI	open the Netherlands
warfarin vs control (on top of aspirin)			
ATACS (pilot study) (warfarin vs control) , 1990 n=37/32 follow-up: 65279;3 months	heparin/warfarin target INR 65279;3-4.5 + aspirin versus aspirin alone	65279;UA, NSTEMI	open
ATACS , 1994 n=105/109 follow-up: 3 months	heparin/warfarin (INR median 2.3) + aspirin versus aspirin	UA, NSTEMI	open
CARS , 1997 n=5410/3393 follow-up: 14 months	warfarin (INR mean 1.5) (3 mg warfarin or 1 mg warfarin with 80 mg aspirin) versus aspirin 160 mg/d	AMI	
OASIS Pilot (phase 1) , 1998 n=155/154 follow-up: 6 months	warfarin 3mg/d for 6 months (INR mean 1.5) versus control	UA, NSTEMI	open
OASIS Pilot (phase 2) , 1998 n=98/99 follow-up: 3 months	warfarin adjusted dose (INR mean 2.3) for 3 months versus standard treatment	UA, NSTEMI	open

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Trial	Treatments	Patients	Trials design and methods
OASIS-2 Warfarin Substudy , 2001 n=1848/1864 follow-up: 5 months	warfarin target INR 65279;22.5 for 5 months +aspirin versus control	UA	open
APRICOT-2 , 2002 n=135/139 follow-up: 3 months	moderate-intensity coumarin target INR 2-3 (+aspirin) versus aspirin	STEMI	
CHAMP , 2002 n=2522/2537 follow-up: 2.7 years	-	AMI	
WARIS , 2002 n=1208/1206 follow-up: 4 years	-	AMI	
LoWASA , 2004 n=1659/1641 follow-up: 5 years	-	AMI	
Zibaeenezhad , 2004 n=70/70 follow-up: 1 year	-	AMI	
warfarin vs placebo (on top of aspirin)			
Williams , 1997 n=29/28 follow-up: 2.5 months	warfarin target INR 65279;22.5 +aspirin versus placebo +aspirin	UA, AMI	double blind
Huyhn , 2001 n=44/46 follow-up: 1 year	warfarin adjusted dose for INR 22.5 +aspirin versus placebo +aspirin	UA, NSTEMI with prior CABG	double blind
coumadin vs aspirin			
ASPECT-2 (coumadin vs aspirin) , 2002 n=325/336 follow-up: 1 year (range 0-26 months)	coumadin (phenprocoumon or acenocoumarol) target INR 3-4) versus aspirin 80mg daily	UA, AMI	Parallel groups open the Netherlands
warfarin vs aspirin			
ATACS (pilot study) warfarin vs aspirin , 1990 n=24/32 follow-up: 65279;3 months	heparin/warfarin target INR 65279;3-4 versus aspirin 65279;325 mg daily	65279;UA, NSTEMI	open

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4 oral factor Xa inhibitor

Trial	Treatments	Patients	Trials design and methods
apixaban vs placebo			
APPRAISE 2 , 2011 [NCT00831441] n=3705/3687 follow-up: 8 months	apixaban 5mg twice daily versus placebo	patients with a recent acute coronary syndrome and at least two additional risk factors for recurrent ischemic events	Parallel groups double blind 39 countries
APPRAISE-1 (10mg od) , 2009 [NCT00313300] n=318/611 follow-up: 6 months	apixaban 10 mg once daily versus placebo	patients with a recent ST-elevation or nonST-elevation acute coronary syndrome(<7 days)	Parallel groups double blind Europe, Middle East, North America
APPRAISE-1 (2.5 mg bid) , 2009 [NCT00313300] n=NA follow-up: 6 months	Apixaban 2.5mg twice daily versus placebo	patients with a recent ST-elevation or nonST-elevation acute coronary syndrome(<7 days)	double blind Europe, Middle East, North America
APPRAISE japan *ongoing* [NCT00852397] n=NA follow-up:	2 doses of apixaban (2.5 mg BID and 5.0 mg BID) for 24 weeks in combination with standard therapy (aspirin and /or additional antiplatelet therapy) versus placebo	patients with recent (<=7 days) acute coronary syndrome	double-blind Japan
rivaroxaban 2.5mg vs placebo			
ATLAS ACS 2 - TIMI 51 (2.5mg) , 2011 [NCT00809965] n=5174/5176 follow-up: 13 months	rivaroxaban 2.5 mg twice daily in addition to standard care versus placebo	patients with a recent ACS	Parallel groups double blind 44 countries
rivaroxaban 5mg vs placebo			
ATLAS ACS 2 - TIMI 51 (5mg) , 2011 [NCT00809965] n=5176/5176 follow-up: 13 months	rivaroxaban 5 mg twice daily in addition to standard care versus placebo	patients with a recent ACS	double blind 44 countries
ximelagatran vs placebo			
ESTEEM , 2003 n=1245/638 follow-up: 6 months	oral ximelagatran at doses of 24 mg, 36 mg, 48 mg, or 60 mg twice daily versus placebo	patients who had had recent ST-elevation or non-STelevation myocardial infarction	Parallel groups double-blind
otamixaban vs unfractionated heparin			

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Trial	Treatments	Patients	Trials design and methods
SEPIA-ACS1 TIMI 42 , 2009 [NCT00317395] n=2792/449 follow-up: 7 days	otamixaban 5 doses (008 mg/kg bolus followed by 0.035, 0.070, 0.105, 0.140, 0.175 mg/kg/h) versus Heparin+eptifibatide	patients with non-ST-elevation acute coronary syndromes	Parallel groups double blind 36 countries

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APPRAISE-1 (2.5 mg bid), 2009:

APPRAISE japan, :

ATLAS ACS 2 - TIMI 51 (2.5mg), 2011:

ATLAS ACS 2 - TIMI 51 (5mg), 2011:

ESTEEM, 2003:

SEPIA-ACS1 TIMI 42, 2009:

5 P2Y12 receptor antagonist

Trial	Treatments	Patients	Trials design and methods
ticagrelor vs clopidogrel			
PLATO , 2009 [NCT00391872] n=9333/9291 follow-up: 1 y	ticagrelor 90mg twice daily versus clopidogrel 75mg once daily	patients with an acute coronary syndrome, with or without ST-segment elevation (onset of symptoms within the previous 24h).	Parallel groups double blind 43 countries
DISPERSE-2 (90mg) , 2007 n=334/327 follow-up: 12 weeks	ticagrelor 90 mg twice daily versus clopidogrel	patients with NSTE-ACS, treated with aspirin and standard therapy for ACS	Parallel groups double blind

References

PLATO, 2009:

DISPERSE-2 (90mg), 2007:

6 PAR-1 inhibitor

Trial	Treatments	Patients	Trials design and methods
atopaxar vs placebo			
LANCELOT ACS n=603 follow-up:	400-mg loading dose of atopaxar followed by a daily dose of 50 mg, 100 mg, or 200 mg for 12 weeks versus placebo	unstable-angina or non-STEMI patients	Parallel groups
J-LANCELOT , 2010 n=NA follow-up:	atopaxar at a loading dose of 400 mg followed by 50 mg per day, 100 mg per day, or 200 mg per day for 12 weeks versus atopaxar at a loading dose of 400 mg followed by placebo	patients with acute coronary syndrome (unstable angina and NSTEMI)	Parallel groups Japan

References

LANCELOT ACS, :
J-LANCELOT, 2010:

7 platelet aggregation inhibitors

Trial	Treatments	Patients	Trials design and methods
triflusal vs aspirin			
TIM , 2000 n=1135/1140 follow-up: 35 days	triflusal 600 mg daily versus aspirine 300 mg daily	AMI within less than 24 h of symptom onsete	Parallel groups double blind Portugal, Spain, Italy
aspirin vs control			
ATACS-pilot , 1990 n=37/24 follow-up: 3m	Aspirin 80mg/d (Heparin + Warfarin) versus full-dose heparin followed by warfarin	acute coronary syndromes	
aspirin vs placebo			
VA-main , 1983 n=661/677 follow-up: 3m	Aspirin 324mg/d versus placebo	men with unstable angina	double blind
Canadian (Aspirin vs PBO) , 1985 n=NA follow-up: 18m	Aspirin 1300mg/d versus placebo	patients with unstable angina	double blind

continued...

Trial	Treatments	Patients	Trials design and methods
VA-pilot *unpublished* n=26/24 follow-up: 3m	-	-	
RISC , 1990 n=474/471 follow-up: 12m	Aspirin 75mg/d versus placebo	men with unstable coronary artery disease (unstable angina or non-Q wave myocardial infarction	Factorial plan double blind Sweden
ALDUSA-pilot *unpublished* n=56/28 follow-up: 12m	-	-	
Throux , 1988 n=121/118 follow-up: 6d (3m)	Aspirin 325 mg twice daily versus placebo	acute unstable angina	double blind
aspirin + dipyridamol vs placebo			
Prandoni , 1991 n=44/44 follow-up: 12m	Aspirin 50mg/d + Dipyridamol 400mg/d versus placebo	patients with acute unstable angina	double blind
aspirin + sulfinpyrazone vs placebo			
Canadian (Aspirin + sulfinpyrazone) , 1985 n=416/139 follow-up: 18m	Aspirin 1300mg/d + sulfinpyrazone 800mg/d versus placebo	patients with unstable angina	double blind
sulfinpyrazone vs placebo			
Canadian (sulfinpyrazone alone) , 1985 n=NA follow-up: 18m	sulfinpyrazone 800mg/d versus placebo	patients with unstable angina	double blind
trapidil vs placebo			
Modena *unpublished* n=71/73 follow-up: 6m	-	-	
triflusal vs placebo			
Plaza , 1993 n=143/138 follow-up: 6m	triflusal 300 mg three times daily versus placebo	patients with unstable angina	Parallel groups double blind Spain
ASA high dose vs ASA low dose			
CURRENT - OASIS 7 (ASA) , 2010 [NCT00335452] n=12507/12579 follow-up: 30 days	High-dose aspirin versus Low-dose aspirin	ACS patients referred for an invasive strategy (scheduled for percutaneous coronary intervention no more than 72 hours after randomization)	Factorial plan open
prasugrel vs clopidogrel			

continued...

Trial	Treatments	Patients	Trials design and methods
TRILOGY ACS (overall population) , 2012 [NCT00699998] n=4663/4663 follow-up: 17 months (median)	prasugrel 10 mg daily versus clopidogrel 75 mg daily	patients with acute coronary syndromes selected for a final treatment strategy of medical management without revascularization within 10 days after the index event	Parallel groups double-blind 52 countries
TRITON-TIMI 38 , 2007 [NCT00097591] n=6813/6795 follow-up:	prasugrel 60-mg loading dose and 10-mg daily maintenance dose, for 6 to 15 months versus clopidogrel (a 300-mg loading dose and a 75-mg daily maintenance dose) for 6 to 15 months	patients with moderate-to-high-risk acute coronary syndromes (UA, NSTEMI,STEMI) with scheduled percutaneous coronary intervention	Parallel groups double blind 30 countries
ACAPULCO *ongoing* n=NA	-	-	

References

TIM, 2000:
ATACS-pilot, 1990:
VA-main, 1983:
Canadian (Aspirin vs PBO), 1985:
VA-pilot, 0:
RISC, 1990:
ALDUSA-pilot, 0:
Throux, 1988:
Prandoni, 1991:
Canadian (Aspirin + sulfinpyrazone), 1985:
Canadian (sulfinpyrazone alone), 1985:
Modena, 0:
Plaza, 1993:
CURRENT - OASIS 7 (ASA), 2010:
TRILOGY ACS (overall population), 2012:
TRITON-TIMI 38, 2007:
ACAPULCO, :

8 selective PAR-1 thrombin receptor antagonist

Trial	Treatments	Patients	Trials design and methods
vorapaxar vs placebo (on top standard therapy)			

continued...

Trial	Treatments	Patients	Trials design and methods
TRACER , 2011 [NCT00527943] n=NA follow-up:	vorapaxar (SCH 530348) oral tablets; 40-mg loading dose on first day, followed by 2.5 mg once daily for at least 1 year versus Placebo (added to the existing standard of care (eg, aspirin, clopidogrel)	patients with acute coronary syndrome	Parallel groups double-blind

References

TRACER, 2011:

9 short term LMWH

Trial	Treatments	Patients	Trials design and methods
dalteparin vs placebo (on top of aspirin)			
FRIC prolonged treatment phase (LWMH vs PBO) , 1997 n=731/751 follow-up: 45 days	dalteparin SC 120 i.u./kg twice-daily for 6 days followed by dalteparin 7500UI daily up to day 45 (+aspirin) versus unfractionated heparin dose-adjusted intravenous infusion (for at least 48h) then by subcutaneous injection up to day 6 (then placebo) (+aspirin)	Patients with unstable angina or non-Q-wave myocardial infarction	Parallel groups double blind
FRISC (long term) , 1996 n=746/760 follow-up: 40 days	dalteparin SC 120 IU per kg bodyweight [maximum 10 000 IU] twice daily for 6 days with 7500 IU once daily for 34-45 days +aspirin versus matched placebo + aspirin	patients with unstable CAD (unstable angina or non-Q-wave myocardial infarction) within the previous 72 hours	Parallel groups double blind Sweden
FRISC (short term) , 1996 n=746/760 follow-up: 6 days	dalteparin SC 120 IU per kg bodyweight [maximum 10 000 IU] twice daily for 6 days with 7500 IU once daily for 34-45 days +aspirin versus matched placebo + aspirin	patients with unstable CAD (unstable angina or non-Q-wave myocardial infarction) within the previous 72 hours	double blind Sweden
LMWH vs placebo (on top of aspirin)			
Gurfinkel (LMWH+asp vs asp) , 1995 n=68/73 follow-up: 5-7 days	aspirin plus low molecular weight heparin (214 UIC/kg anti-Xa twice daily subcutaneously versus aspirin (200 mg/day	patients with unstable angina	Parallel groups single blind
enoxaparin vs unfractionated heparin			

continued...

Trial	Treatments	Patients	Trials design and methods
RESCUE [NCT00077818] n=NA follow-up: 30 days	Enoxaparin versus unfractionated heparin	patients diagnosed with acute coronary syndrome in the emergency department	Parallel groups open
enoxaparin vs tinzaparin			
EVET , 2005 n=220/218 follow-up: 30 days	enoxaparin, 100 IU/kg subcutaneously twice daily +aspirin for 7 days versus tinzaparin, 175 IU/kg subcutaneously once daily +aspirin for 7 days	patients with non-ST-segment elevation acute coronary syndromes	Parallel groups open
dalteparin vs UFH (on top of aspirin)			
FRIC (acute phase LMWH vs UFH) , 1997 n=751/731 follow-up: 6 days	twice-daily weight-adjusted subcutaneous injections of dalteparin (120 i.u./kg) (+aspirin) versus dose-adjusted intravenous infusion of unfractionated heparin (+aspirin)	Patients with unstable angina or non-Q-wave myocardial infarction	open
enoxaparin vs UFH (on top of aspirin)			
ESSENCE , 1997 n=1607/1564 follow-up: 14 days (30 days)	enoxaparin 1mg/kg, twice daily during 48h-8days versus continuous intravenous unfractionated heparin	patients with angina at rest or nonQ-wave myocardial infarction	Parallel groups Double blind United states, Canada, South America, Europe
INTERACT , 2006 n=380/366 follow-up: 30 days (2.5y)	enoxaparin (1 mg/kg subcutaneously twice daily) for 48 hours (+eptifibatide and aspirin) versus intravenous UFH (70 U/kg bolus followed by 15 U/kg per hour adjusted to an activated partial thromboplastin time of 1.5-2 times control) for 48 hours (+eptifibatide and aspirin)	high-risk patients with ACS receiving aspirin and eptifibatide	Parallel groups open Canada
SYNERGY , 2005 [NCT00043784] n=4993/4985 follow-up: 30 days	Enoxaparin 1 mg/kg twice daily versus unfractionated heparin	high-risk patients with acute coronary syndromes	Parallel groups open 12 countries
TIMI 11 B (long term) , 1998 n=1953/1957 follow-up: 43 days	enoxaprin during both the acute phase (IV) and outpatient phase (SC) versus intravenous UFH for >=3 days (followed by subcutaneous placebo injections)	unstable angina/nonQ-wave myocardial infarction	double blind North America, South America,
TIMI 11 B (short term) , 1998 n=1953/1957 follow-up: 8 days (43 days)	enoxaprin during both the acute phase and outpatient phase versus intravenous UFH for >=3 days (followed by subcutaneous placebo injections)	unstable angina/nonQ-wave myocardial infarction	Parallel groups double blind North America, South America,

continued...

Trial	Treatments	Patients	Trials design and methods
LMWH vs UFH (on top of aspirin)			
Gurfinkel (LMWH+asp vs UFH+asp) , 1995 n=68/70 follow-up: 5-7 days	aspirin plus low molecular weight heparin (214 UIC/kg anti-Xa twice daily subcutaneously versus aspirin plus regular heparin (400 IU/kg body weight per day intravenously and titered by activated partial thromboplastin time	patients with unstable angina	Parallel groups single blind
nadroparin vs UFH (on top of aspirin)			
FRAXIS (14 days) , 1998 n=1151/1151 follow-up: 14 days	nadroparin for 14 days versus unfractionated heparin for 14 days	unstable angina or non-Q wave myocardial infraction	double blind 17 countries
FRAXIS (6days) , 1998 n=1166/1151 follow-up: 14 days	nadroparin for 6 days (+aspirin) versus unfractionated heparin for 6 days (+aspirin)	unstable angina or non-Q wave myocardial infraction	Parallel groups Double blind 17 countries

References

FRIC prolonged treatment phase (LWMH vs PBO), 1997:
FRISC (long term), 1996:
FRISC (short term), 1996:
Gurfinkel (LMWH+asp vs asp), 1995:
RESCUE, :
EVET, 2005:
FRIC (acute phase LMWH vs UFH), 1997:
ESSENCE, 1997:
INTERACT, 2006:
SYNERGY, 2005:
TIMI 11 B (long term), 1998:
TIMI 11 B (short term), 1998:
Gurfinkel (LMWH+asp vs UFH+asp), 1995:
FRAXIS (14 days), 1998:
FRAXIS (6days), 1998:

10 short term UFH

Trial	Treatments	Patients	Trials design and methods
UFH vs control (on top of aspirin)			

continued...

Trial	Treatments	Patients	Trials design and methods
Holdright , 1994 n=154/131 follow-up: hospital stay	intravenous heparin plus oral aspirin (150 mg once daily) versus aspirin alone 150 mg/d	unstable angina	Parallel groups single blind
RISC (heparin+aspirin vs ASP) , 1990 n=210/189 follow-up: 90 days	5 days of intermittent intravenous heparin + oral aspirin 75 mg/day versus oral aspirin 75 mg/day	unstable angina or non-Q-wave myocardial infarction	Parallel groups open
Theroux (heparin+ASP vs ASP) , 1988 n=122/121 follow-up: 3-9 days	aspirin 325 mg/d + heparin 1000 UI/hr IV versus aspirin 325 mg/d		double blind
UFH, warfarin vs control (on top of aspirin)			
ATACS (Cohen) , 1994 n=105/109 follow-up: 12 weeks	aspirin 162.5 mg daily plus heparin (activated partial thromboplastin time, two times control) followed by aspirin 162.5 mg daily plus warfarin (international normalized ratio, 2 to 3) for 12 weeks. versus aspirin alone (162.5 mg daily) for 12 weeks.	patients with unstable rest angina or non-Q-wave myocardial infarction with last episode of pain within 48 hours of randomization and who were nonprior aspirin users	Parallel groups single blind
Cohen (ATACS pilot) (heparin+aspirin vs asp) , 1990 n=37/32 follow-up: 12 weeks	aspirin (80 mg/day) plus heparin and then warfarin versus aspirin (325 mg/day)	Patients between 21 and 75 years with unstable angina or non-Q-wave MI with last episode of pain within 48 hours of screening.	Parallel groups open
UFH vs placebo			
RISC (heparin vs PBO) , 1990 n=198/199 follow-up: 1y (5,30 and 90 days)	5 days of intermittent intravenous heparin versus placebo	men with unstable coronary artery disease (unstable angina or non-Q-wave myocardial infarction)	Factorial plan Sweden
Theroux (heparin vs PBO) , 1988 n=118/118 follow-up: 3-9 days	heparin (1000 units per hour by intravenous infusion) versus placebo	patients with acute unstable angina pectoris	double blind
UFH + aspirin vs placebo			
RISC (ASP+ heparin vs PBO) , 1990 n=210/199 follow-up: 1y (5,30 and 90 days)	oral apsirin 75mg/d + intermittent IV heparin 10000UI/d followed by 7500 UI 6-hourly for 4 days versus placebo	men with unstable coronary artery disease (unstable angina or non-Q-wave myocardial infarction)	Sweden
Theroux (heparin+aspirin vs PBO) , 1988 n=122/118 follow-up: 3-9 days	heparin (1000 units per hour by intravenous infusion)+ aspirin (325 mg twice daily) versus aspirin (325 mg twice daily)	-	double blind

continued...

Trial	Treatments	Patients	Trials design and methods
UFH vs placebo (on top of aspirin)			
Gurfinkel (UFH+aspririn vs aspirin) , 1995 n=70/73 follow-up: 5-7 days	aspirin plus UFH 5000 IU iv then 400 IU/kg body weight per day intravenously and titered by activated partial thromboplastin time versus aspirin 200 mg/day	patients greater than 21 years with ustable angina within 24 hours of randomizationcatio	Parallel groups double blind
UFH, warfarin vs aspirin			
Cohen (ATACS pilot) (heparin vs asp) , 1990 n=24/32 follow-up: 12 weeks	heparin followed by warfarin (without aspirin) versus aspirin 325 mg/day	Patients between 21 and 75 years with unstable angina or non-Q-wave MI with last episode of pain within 48 hours of screening	Parallel groups open

References

Holdright, 1994:
RISC (heparin+aspirin vs ASP), 1990:
Theroux (heparin+ASP vs ASP), 1988:
ATACS (Cohen), 1994:
Cohen (ATACS pilot) (heparin+aspirin vs asp), 1990:
RISC (heparin vs PBO), 1990:
Theroux (heparin vs PBO), 1988:
RISC (ASP+ heparin vs PBO), 1990:
Theroux (heparin+aspirin vs PBO), 1988:
Gurfinkel (UFH+aspririn vs aspirin), 1995:
Cohen (ATACS pilot) (heparin vs asp), 1990:

11 synthetic oligosaccharide

Trial	Treatments	Patients	Trials design and methods
fondaparinux vs enoxaparin			
OASIS 5 , 2006 [NCT00139815] n=10057/10021 follow-up: 9 days (180 days)	fondaparinux 2.5 mg daily until hospital discharge or for up to eight days versus enoxaparin 1 mg per kilogram of body weight twice daily for two to eight days or until the patient was in clinically stable condition	patients with acute coronary syndromes	Parallel groups double blind 41 countires
PENTUA , 2004 n=908/230 follow-up: 9 days	Four doses fondaparinux (2.5, 4, 8, or 12 mg once daily) for three to seven days versus enoxaparin (1 mg/kg twice daily) for three to seven days	patients with ACS without persistent ST-segment elevation	

References

OASIS 5, 2006:
PENTUA, 2004:

12 thienopyridine

Trial	Treatments	Patients	Trials design and methods
ticlopidine vs control			
STAI , 1990 n=314/338 follow-up: 6m	ticlopidine 250 mg b.i.d versus untreated control	patients with unstable angina <=48hrs from the pain onset	single blind
ticlopidine vs placebo			
Florida UA *unpublished* n=12/12 follow-up: 14d	-	-	
clopidogrel + aspirin vs aspirin			
CURE , 2001 n=6259/6303 follow-up: NA (median <9 months)	clopidogrel 300 mg immediately, followed by 75 mg once daily + aspirin for 3 to 12 months versus aspirin (+placebo)	acute coronary syndromes without ST-segment elevation within 24 hours after the onset of symptoms	Parallel groups double blind 28 countries
prasugrel vs clopidogrel			
TRILOGY ACS (overall population) , 2012 [NCT00699998] n=4663/4663 follow-up: 17 months (median)	prasugrel 10 mg daily versus clopidogrel 75 mg daily	patients with acute coronary syndromes selected for a final treatment strategy of medical management without revascularization within 10 days after the index event	Parallel groups double-blind 52 countries
TRITON-TIMI 38 , 2007 [NCT00097591] n=6813/6795 follow-up:	prasugrel 60-mg loading dose and 10-mg daily maintenance dose, for 6 to 15 months versus clopidogrel (a 300-mg loading dose and a 75-mg daily maintenance dose) for 6 to 15 months	patients with moderate-to-high-risk acute coronary syndromes (UA, NSTEMI,STEMI) with scheduled percutaneous coronary intervention	Parallel groups double blind 30 countries
ACAPULCO *ongoing* n=NA	-	-	
clopidogrel high-dose regimen vs clopidogrel standard-dose			
CURRENT OASIS 7 (clopidogrel) , 2010 [NCT00335452] n=12520/12566 follow-up: 30 days	Double-dose clopidogrel versus Standard-dose clopidogrel	ACS patients referred for an invasive strategy (scheduled for percutaneous coronary intervention no more than 72 hours after randomization)	Factorial plan open

References

STAI, 1990:
Florida UA, 0:
CURE, 2001:
TRILOGY ACS (overall population), 2012:
TRITON-TIMI 38, 2007:
ACAPULCO, :
CURRENT OASIS 7 (clopidogrel), 2010:

13 About TrialResults-center.org

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