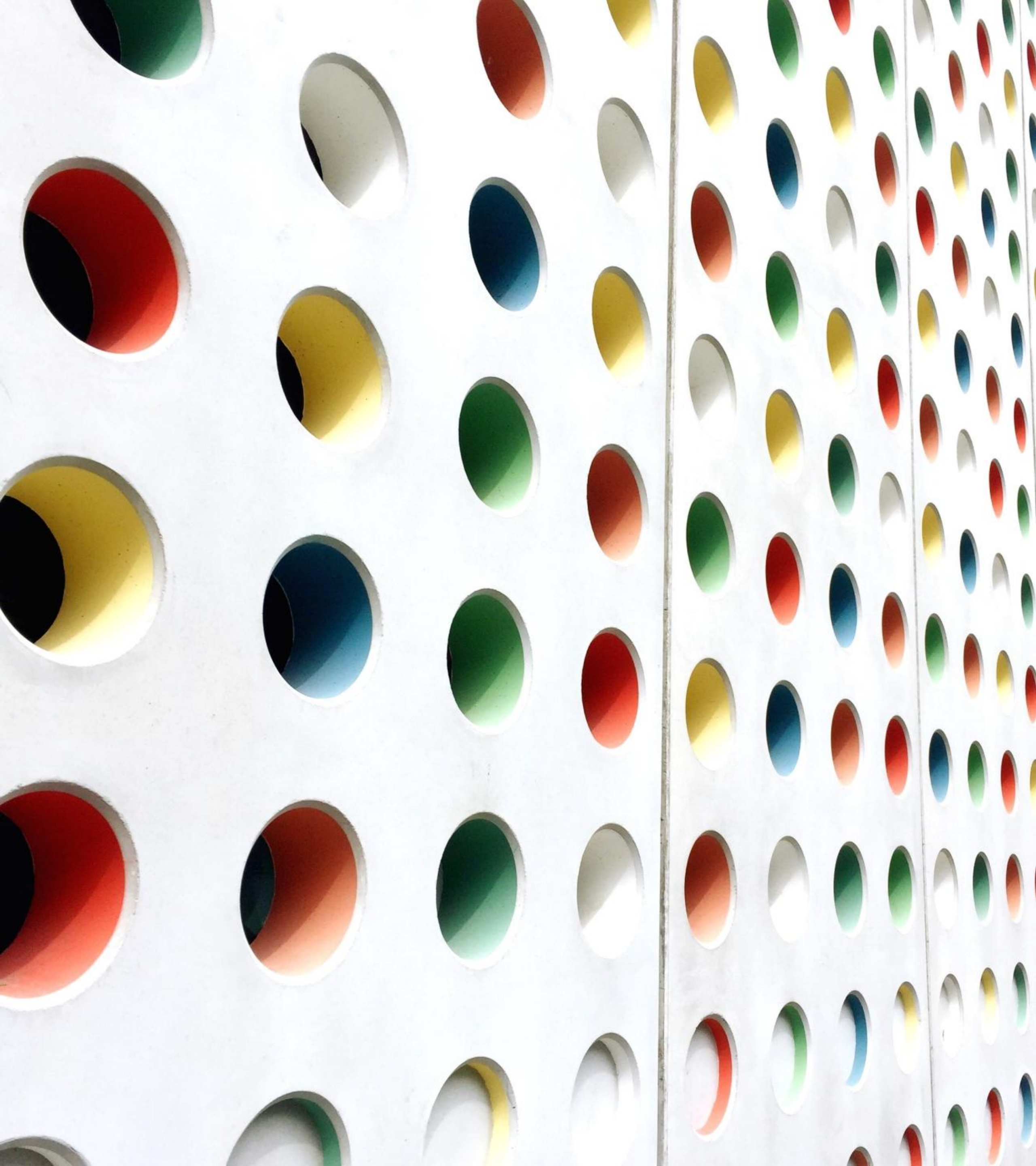
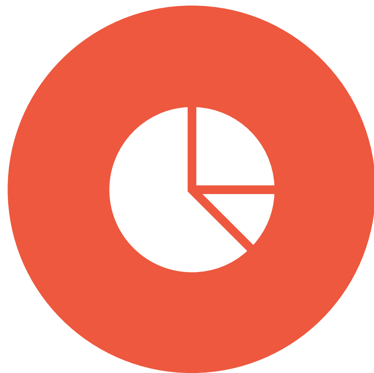


Standardisasi Pharmaceutical Care Sindrom Koroner Akut

WINDA KIRANA ADE PUTRI, M.CLIN.PHARM., APT

Over View



TERAPI FARMAKOLOGIS PADA SINDROM KORONER AKUT .

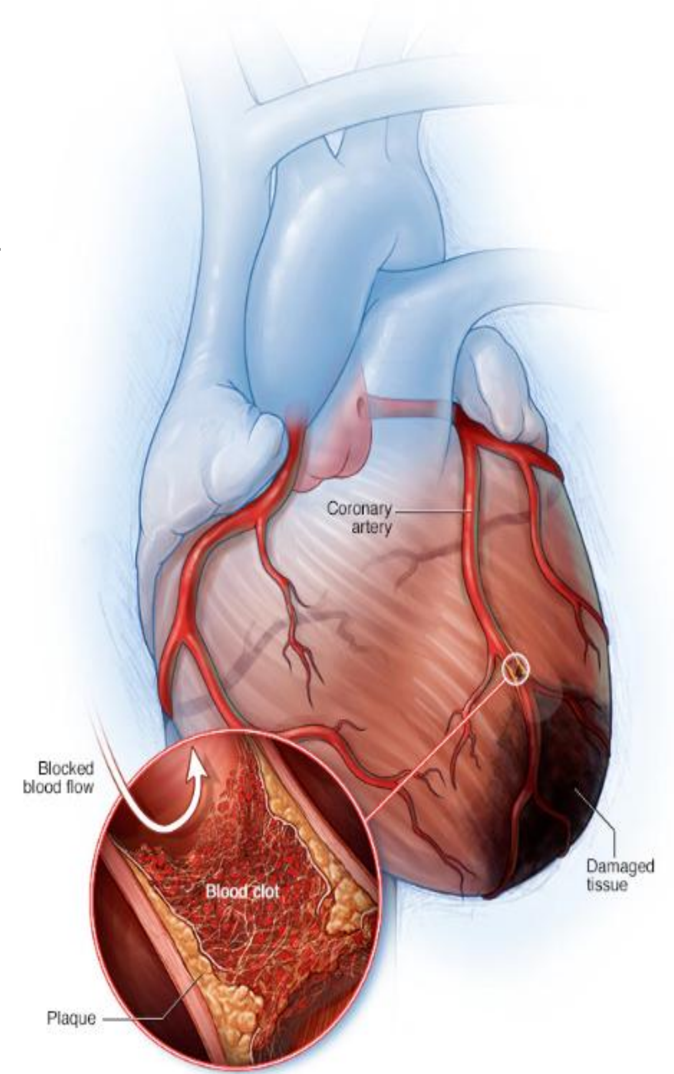
PERAN APOTEKER DALAM PHARMACEUTICAL CARE PASIEN SKA

STANDARDISASI PELAYANAN KEFARMASIAN PADA PASIEN SKA

DEFINITION

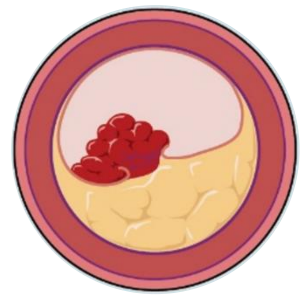
- Acute coronay sindome (ACS) → suatu spektrum kondisi pasien yang mengalami perubahan gejala atau tanda klinis baru, dengan atau tanpa perubahan EKG 12 lead, dan dengan atau tanpa peningkatan akut kadar troponin T jantung

- Infark Mycard (MI) ditandai dengan peningkatan dan/atau penurunan nilai suatu biomarka jantung dan setidaknya disertai salah satu dari : gejala iskemia miocard, perubahan EKG iskemia terbaru, gelombang Q patologis pada EKG, bukti pencintraan hilangnya myocardium yang layak, adanya trombus intrakoroner pada angiografi atau otopsi

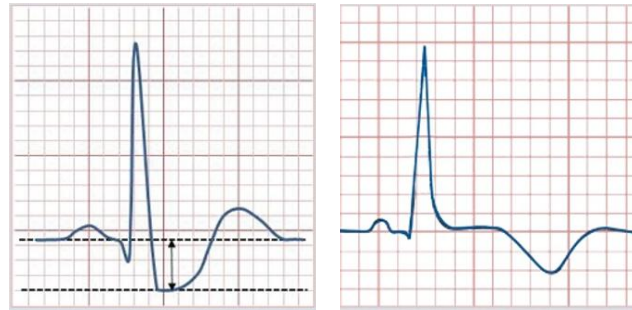


Perki, 2024. Pedoman Tatalaksana Sindrom Koroner Akut. Edisi ke 5

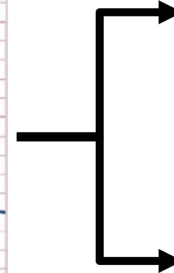
Classifications of Acute Coronary Syndromes



Non-Occlusive Thrombus

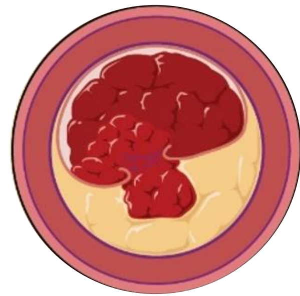


ST Depression or T Wave Inversion
(May be electrically silent)

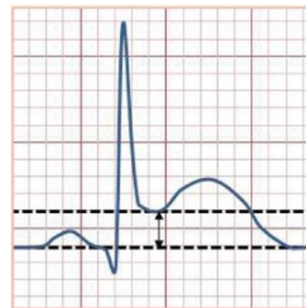


Biomarker Negative — **Unstable Angina**

Biomarker Positive — **NSTEMI**



Occlusive Thrombus



ST Elevation

Biomarker Positive — **STEMI**

(May be negative if drawn too early from symptom onset)

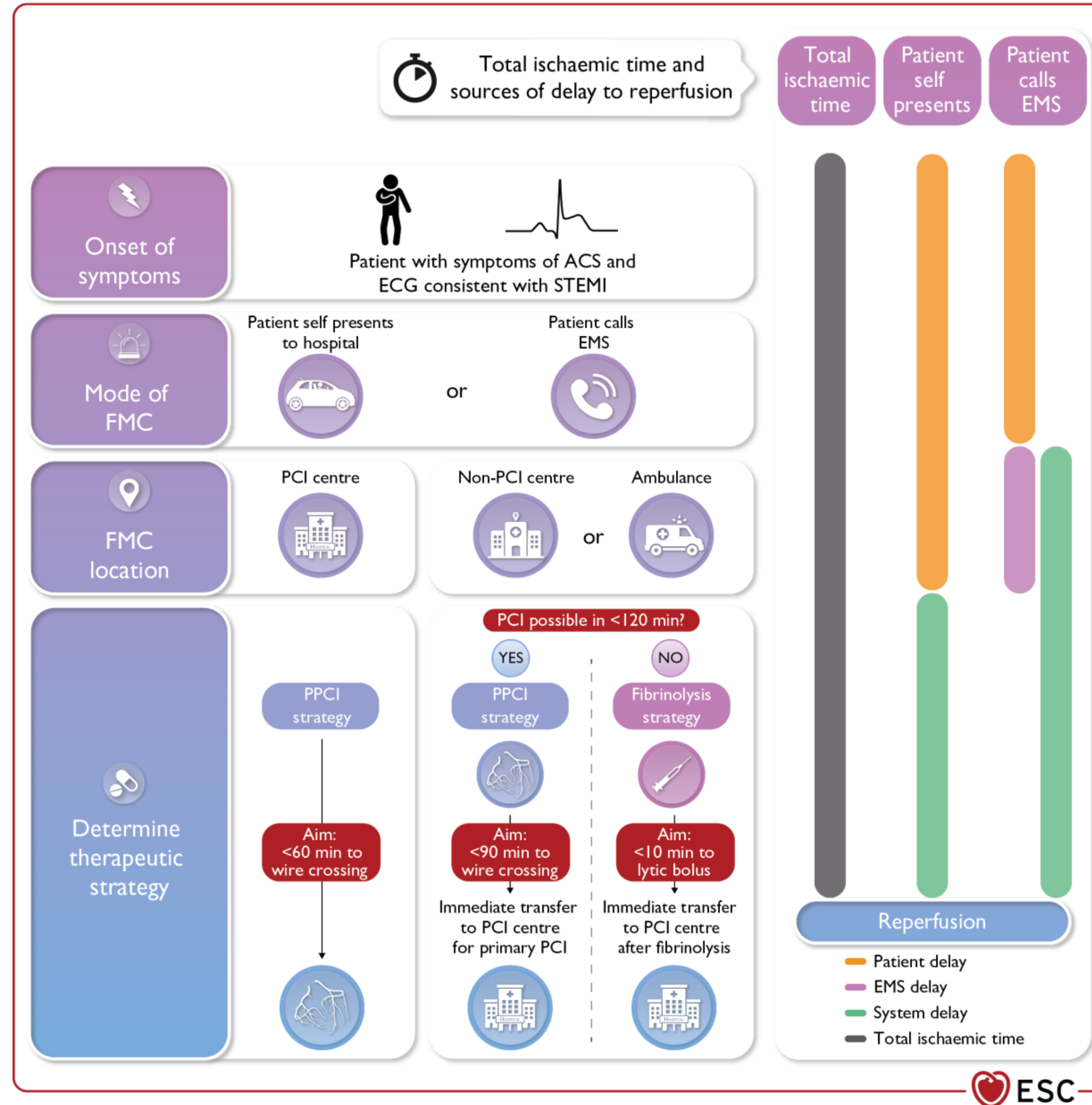
Abbreviations: NSTEMI indicates non-ST-elevation myocardial infarction; and STEMI, ST-elevation myocardial infarction.

American Heart Association.

Rao, S.V., et al. 2025 AHA/ACC/ACEP/NAEMSP/SCAI Guideline for Acute Coronary Syndromes. *Circulation.*

Figure 7

Modes of presentation and pathways to invasive management and myocardial revascularization in patients presenting with STEMI



ESC

©ESC

2023 ESC Guidelines for the management of acute coronary syndromes
(European Heart Journal; 2023 – doi:10.1093/eurheartj/ehad191)

Obat fibrinolitik →120 menit tidak bisa sampai ke tempat IKP

Table 1: Comparison of fibrinolytic agents [12, 13]

	Streptokinase	**Alteplase**	**Tenecteplase**	**Reteplase**
Antigenicity	Yes	No	No	No
Allergic reaction	Yes	No	No	No
Systemic fibrinogen depletion	Marked	Mild	Minimal	Moderate
Approximate 90-Minute Patency (%)	50	75	75	60-70
TIMI Grade 3 Flow (%)	32	54	63	60
Molecular Weight (kD)	48,000	70,000	65,000	39,000
Plasma Half-Life (min)	18–23	5	20–24	13–16
Fibrin Specificity	Low	High	Very high	Moderate
Bolus Dosing	Nosss	No	Yes	Yes
Weight-Based Dosing	No	Yes	Yes	No
Dose and administration	1.5 MU infusion over 60 min	15 mg bolus plus 90-min infusion up to 85 mg	0.53 mg/kg single bolus given over 5 seconds	10 + 10 units double bolus given over 2 min with 30 minutes

Tatalaksana Awal SKA

Tabel Rekomendasi 3. Rekomendasi tata laksana awal SKA

Rekomendasi	Kelas	Level
Aspirin		
Direkomendasikan untuk semua pasien tanpa kontraindikasi dengan LD 160-320 mg p.o.; diikuti dosis rumatan 80-100 mg p.o. 1x/hari	I	A
Hipoksia		
Oksigen direkomendasikan pada pasien dengan hipoksemia (SaO2<90%)	I	C
Oksigen rutin tidak direkomendasikan pada pasien tanpa hipoksemia (SaO2>90%)	III	A
Nitrat		
Nitrat sublingual atau intravena direkomendasikan pada pasien dengan gejala iskemik yang masih berlangsung dan tanpa kontraindikasi	I	C
Nitrat tidak boleh diberikan kepada pasien dengan hipotensi, bradikardia atau takikardia yang ekstrim, infark ventrikel kanan, stenosis aorta berat, atau pemakaian inhibitor fosfodiesterase 5 dalam waktu 24-48 jam sebelumnya	III	C
Gejala		
Opioid intravena harus dipertimbangkan untuk penghilang nyeri	IIa	C
Obat penenang ringan harus dipertimbangkan pada pasien yang sangat cemas	IIa	C
Penyekat beta intravena		
Penyekat beta intravena (sebaiknya metoprolol) harus dipertimbangkan pada saat pasien datang (pasien yang menjalani IKP primer tanpa tanda-tanda gagal jantung akut, tekanan sistolik >120 mmHg, dan tanpa kontraindikasi lain)	IIa	A

Table 2

Additional Routine Medical Therapies Used in ACS

Therapy	Usage Recommendations	Avoid With	Caution With
Oxygen	Oxygen saturation <90%	—	COPD, CO_2 retention
Nitroglycerin	Ongoing chest pain (SL); persistent ischemia, HTN, HF (IV)	Hypotension, recent PDE inhibitor use	RV infarction
IV morphine	STEMI: pain; NSTE-ACS: persistent chest pain despite anti-ischemic therapy	Lethargy, hypotension, bradycardia	—
Beta-blocker	Within 1st 24 h in absence of HF, low-output state, risk of cardiogenic shock, other contraindications	RAD, signs of HF, low-output state, other contraindications to beta blockade	Increased risk of cardiogenic shock, IV use
Non-DHP calcium channel blocker (e.g., verapamil or diltiazem)	For ischemic symptoms when beta-blockers are unsuccessful, are contraindicated, or cause unacceptable adverse effects	LV dysfunction, increased risk of cardiogenic shock, PR interval >0.24 s, or 2nd- or 3rd-degree AV block without pacemaker; the DHP nifedipine IR (use only in NSTE-ACS with beta-blocker)	—
ACE inhibitor (ARB, if intolerant)	Within 1st 24 h if LVEF ≤0.40, HF, STEMI with anterior infarction, absence of contraindications	Hypotension, shock, bilateral renal artery stenosis, renal failure	—
High-intensity statin	All patients	—	CYP3A4 inhibitors/inducers, fibrates; myopathy (monitor), hepatic toxicity

ACS: acute coronary syndrome; ARB: angiotensin receptor blocker; AV: atrioventricular; COPD: chronic obstructive pulmonary disease; DHP: dihydropyridine; HF: heart failure; HTN: hypertension; IR: immediate-release; LV: left ventricular; LVEF: left ventricular ejection fraction; MI: myocardial infarction; NSTE-ACS: non–ST-segment elevation ACS; PDE: phosphodiesterase; RAD: reactive-airway disease; RV: right ventricular; SL: sublingual; STEMI: ST-segment elevation MI.
Source: References 2, 4.

Terapi farmakologis

Table 1

Recommended Antiplatelet and Anticoagulation Therapies Used in ACS

Medication and Class	Route	STEMI (With Primary PCI)	STEMI (With Fibrinolytic Therapy)	NSTE-ACS	Notable Adverse Effects[a]
Antiplatelet Therapy					
Aspirin (COX-1 inhibitor)	Oral	✓	✓	✓	—
Clopidogrel ($P2Y_{12}$ receptor antagonist)	Oral	✓	✓	✓	TTP, avoid concomitant omeprazole or esomeprazole
Prasugrel ($P2Y_{12}$ receptor antagonist)	Oral	✓	No specific recommendation	No specific recommendation	TTP, hypersensitivity
Ticagrelor ($P2Y_{12}$ receptor antagonist)	Oral	✓	No specific recommendation	✓	Dyspnea
Cangrelor[b] ($P2Y_{12}$ receptor antagonist)	IV	✓	No specific recommendation	✓	Hypersensitivity, decreased renal function, dyspnea
Abciximab (GP IIb/IIIa receptor antagonist)	IV	✓	No specific recommendation	✓	Allergic reactions, thrombocytopenia
Tirofiban (GP IIb/IIIa receptor antagonist)	IV	✓	No specific recommendation	✓	Thrombocytopenia
Eptifibatide (GP IIb/IIIa receptor antagonist)	IV	✓	No specific recommendation	✓	Thrombocytopenia, hypotension
Anticoagulant Therapy					
Unfractionated heparin (anticoagulant)	IV	✓	✓	✓	Thrombocytopenia, HIT/HITTS, injection-site irritation, hypersensitivity, aminotransferase elevation, benzyl alcohol toxicity
Bivalirudin (direct thrombin inhibitor)	IV	✓	May use if patient develops HIT and requires continued anticoagulation	✓	Headache, thrombocytopenia, fever, acute stent thrombosis, coronary artery brachytherapy, INR interference
Enoxaparin (LMWH)	IV/SC	No specific recommendation	✓	✓	HIT with or without thrombosis, anemia, thrombocytopenia, aminotransferase elevation, diarrhea, nausea, ecchymosis, fever, edema, peripheral edema, dyspnea, confusion, injection-site pain
Fondaparinux (factor Xa inhibitor)	IV/SC	Not recommended as sole anticoagulant	✓	✓	Spinal or epidural hematomas, thrombocytopenia

[a] Other than bleeding. [b] Based on cangrelor prescribing information. ACS: acute coronary syndrome; COX: cyclooxygenase; GP: glycoprotein; HIT: heparin-induced thrombocytopenia; HITTS: heparin-induced thrombocytopenia and thrombosis; INR: international normalized ratio; LMWH: low-molecular-weight heparin; NSTE-ACS: non–ST-segment elevation ACS; PCI: percutaneous coronary intervention; STEMI: ST-segment elevation myocardial infarction; TTP: thrombotic thrombocytopenia purpura.

Source: References 2, 4, 7, 11-14, 17-20, 23-25.

Table 6 Dose regimen of antiplatelet and anticoagulant drugs in acute coronary syndrome patients

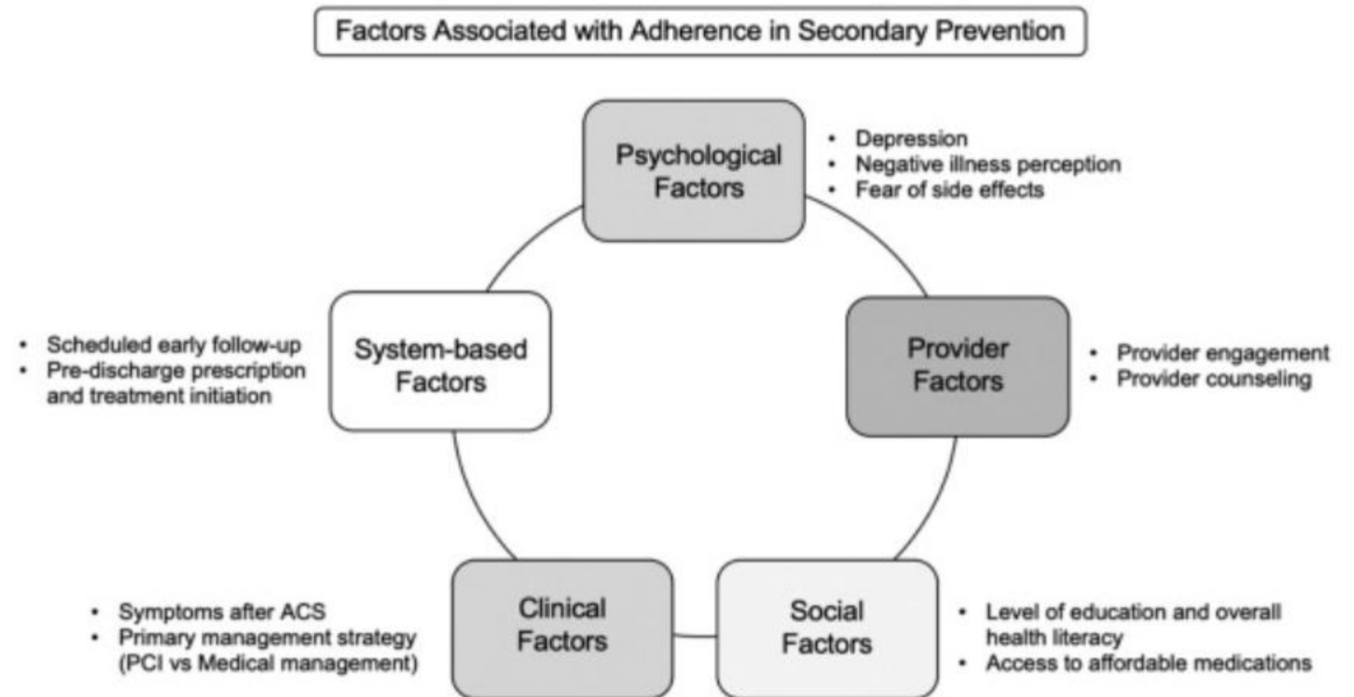
I. Antiplatelet drugs	
Aspirin	LD of 150–300 mg orally or 75–250 mg i.v. if oral ingestion is not possible, followed by oral MD of 75–100 mg o.d.; no specific dose adjustment in CKD patients.
$P2Y_{12}$ receptor inhibitors (oral or i.v.)	
Clopidogrel	LD of 300–600 mg orally, followed by an MD of 75 mg o.d.; no specific dose adjustment in CKD patients. Fibrinolysis: at the time of fibrinolysis an initial dose of 300 mg (75 mg for patients older than 75 years of age).
Prasugrel	LD of 60 mg orally, followed by an MD of 10 mg o.d. In patients with body weight <60 kg, an MD of 5 mg o.d. is recommended. In patients aged ≥75 years, prasugrel should be used with caution, but a MD of 5 mg o.d. should be used if treatment is deemed necessary. No specific dose adjustment in CKD patients. Prior stroke is a contraindication for prasugrel.
Ticagrelor	LD of 180 mg orally, followed by an MD of 90 mg b.i.d.; no specific dose adjustment in CKD patients.
Cangrelor	Bolus of 30 mcg/kg i.v. followed by 4 mcg/kg/min infusion for at least 2 h or the duration of the procedure (whichever is longer). In the transition from cangrelor to a thienopyridine, the thienopyridine should be administered immediately after discontinuation of cangrelor with an LD (clopidogrel 600 mg or prasugrel 60 mg); to avoid a potential DDI, prasugrel may also be administered 30 min before the cangrelor infusion is stopped. Ticagrelor (LD 180 mg) should be administered at the time of PCI to minimize the potential gap in platelet inhibition during the transition phase.
GP IIb/IIIa receptor inhibitors (i.v.)	
Eptifibatide	Double bolus of 180 mcg/kg i.v. (given at a 10-min interval) followed by an infusion of 2.0 mcg/kg/min for up to 18 h. For CrCl 30–50 mL/min: first LD, 180 mcg/kg i.v. bolus (max 22.6 mg); maintenance infusion, 1 mcg/kg/min (max 7.5 mg/h). Second LD (if PCI), 180 mcg/kg i.v. bolus (max 22.6 mg) should be administered 10 min after the first bolus. Contraindicated in patients with end-stage renal disease and with prior ICH, ischaemic stroke within 30 days, fibrinolysis, or platelet count <100 000/mm^3.
Tirofiban	Bolus of 25 mcg/kg i.v. over 3 min, followed by an infusion of 0.15 mcg/kg/min for up to 18 h. For CrCl ≤60 mL/min: LD, 25 mcg/kg i.v. over 5 min followed by a maintenance infusion of 0.075 mcg/kg/min continued for up to 18 h. Contraindicated in patients with prior ICH, ischaemic stroke within 30 days, fibrinolysis, or platelet count <100 000/mm^3.
II. Anticoagulant drugs	
UFH	Initial treatment: i.v. bolus 70–100 U/kg followed by i.v. infusion titrated to achieve an aPTT of 60–80 s. During PCI: 70–100 U/kg i.v. bolus or according to ACT in case of UFH pre-treatment.
Enoxaparin	Initial treatment: for treatment of ACS 1 mg/kg b.i.d. subcutaneously for a minimum of 2 days and continued until clinical stabilization. In patients whose CrCl is below 30 mL per minute (by Cockcroft–Gault equation), the enoxaparin dosage should be reduced to 1 mg per kg o.d. During PCI: for patients managed with PCI, if the last dose of enoxaparin was given less than 8 h before balloon inflation, no additional dosing is needed. If the last s.c. administration was given more than 8 h before balloon inflation, an i.v. bolus of 0.3 mg/kg enoxaparin sodium should be administered.
Bivalirudin	During PPCI: 0.75 mg/kg i.v. bolus followed by i.v. infusion of 1.75 mg/kg/h for 4 h after the procedure. In patients whose CrCl is below 30 mL/min (by Cockcroft–Gault equation), maintenance infusion should be reduced to 1 mg/kg/h.
Fondaparinux	Initial treatment: 2.5 mg/d subcutaneously. During PCI: A single bolus of UFH is recommended. Avoid if CrCl <20 mL/min.

© ESC 2023

ESC,2023. Guideline for management acyte coronary sindrome

Peran Apoteker dalam Pengobatan ACS

- Polifarmasi → Kepatuhan, DRP
- Geriatri → lupa
- Pola hidup yang tidak sehat



Cecillia Bahit,ckk.2023, Patient Adherence to Secondary Prevention Therapies After an Acute Coronary Syndrome: A Scoping Review. Elsevier

Dimana Peran Apoteker??

Fase Akut

- Pemilihan terapi antiplatelet awal yang optimal, dosis dan durasi yang tepat
- Rekomendasi profilaksis tukak lambung pada pasien berusia $\geq$ 65 tahun
- Memantau efektivitas terapi
- Memantau efek samping obat
- Mengidentifikasi interaksi obat-obat dan duplikasi terapi
- Merekomendasikan alternatif yang tepat untuk terapi yang gagal atau suboptimal
- Memantau pemberian terapi obat
- Melakukan edukasi dan konseling pasien (farmakologi dan nonfarmakologi)
- Kepatuhan terhadap Pedoman dan Formularium

- ❑ Memantau Kepatuhan Minum Obat Pasien
- ❑ Edukasi pasien dengan menjelaskan kebutuhan setiap obat dan tanda-tanda efek samping
- ❑ Memberikan pengingat untuk kontrol ulang
- ❑ Memastikan bahwa pasien diresepkan semua obat penting pada setiap tahap penyakit
- ❑ mengevaluasi interaksi obat dan merekomendasikan agen alternatif bila sesuai

> Front Pharmacol. 2023 Aug 23:14:1249636. doi: 10.3389/fphar.2023.1249636. eCollection 2023.

Impact of continuous pharmaceutical care led by clinical pharmacists during transitions of care on medication adherence and clinical outcomes for patients with coronary heart disease: a prospective cohort study

Lingyan Gao [1], Yalei Han [2], Zhankun Jia [2], Pengfei Wang [2], Meijing Zhang [2], Teng Ma [2], Suying Yan [3], Hua Liu [1]

1, 3, and 6 months after discharge between the two groups. **Results:** A total of 228 patients with CHD completed the study, including 113 patients in the CPC group and 115 patients in the UC group. There were no significant differences ($p > 0.05$) in both groups in demographic and clinical characteristics at baseline. A total of 101 drug-related problems were identified in the CPC group (an average of 0.89 per person). The CPC group showed significantly higher medication adherence at 1, 3, and 6 months after discharge than the UC group ($p < 0.05$). At 3 and 6 months after discharge, the intervention group had significantly higher control rates of LDL-C (61.11% vs. 44.64% at 3 months, 78.18% vs. 51.43% at 6 months), and BP (91.15% vs. 77.39% at 3 months, 88.50% vs. 77.19% at 6 months). The CPC group had higher HbA1c control rates (53.85% vs. 34.21% at 3 months, 54.05% vs. 38.46% at 6 months) than the UC group. However, the differences were not statistically significant. The incidence of ADRs 6 months after discharge was significantly lower in the CPC group than in the UC group (5.13% vs. 12.17%, $p < 0.05$). The CPC group had a lower overall readmission rate (13.27% vs. 20.00%), MACE-related readmission rate (5.31% vs. 12.17%), and readmission rate related to CHD risk factors (0.88% vs. 2.61%) 6 months after discharge compared to the UC group. However, these differences were not statistically significant ($p > 0.05$). **Conclusion:** CPC led by clinical pharmacists during care transitions effectively improved medication adherence, safety, and risk factor control in patients with CHD.

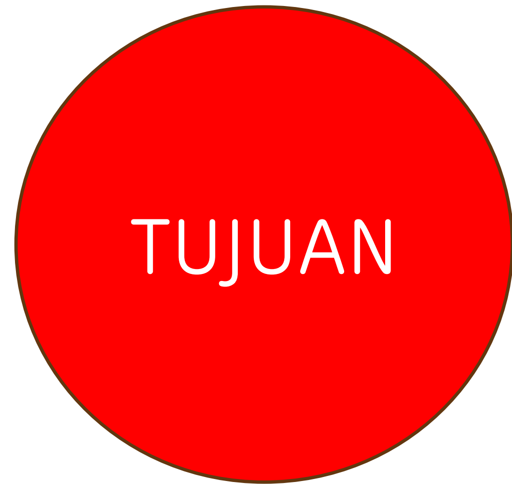
Randomized Controlled Trial > Basic Clin Pharmacol Toxicol. 2019 Jul;125(1):44-53.
doi: 10.1111/bcpt.13210. Epub 2019 Apr 1.

Management of pharmacotherapy-related problems in acute coronary syndrome: Role of clinical pharmacist in cardiac rehabilitation unit

Eman Ahmed Casper [1], Lamiaa Mohamed El Wakeel [1], Mohamed Ayman Saleh [2], Manal Hamed El-Hamamsy [3]

programme. Forty ACS patients were randomly assigned to either control group, who received standard medical care, or intervention group, who received standard medical care plus clinical pharmacist-provided services. Services included DRP management, clinical assessment and enforcing the patient education and adherence. For both groups, the following were assessed at baseline and after 3 months: DRPs, adherence (assessed by 8-item Morisky Adherence Questionnaire), patient's knowledge (assessed by Coronary Artery Disease Questionnaire), 36-Short Form Health Survey (SF-36), heart rate, systolic and diastolic blood pressure, low-density lipoprotein (LDL), total cholesterol (TC) and fasting blood glucose (FBG). After 3 months, there was a significant difference between the intervention and control groups in the per cent change of DRPs (median: -100 vs 5.882, P = 0.0001), patient's adherence score (median: 39.13 vs -14.58, P = 0.0001), knowledge score (median: 30.28 vs -5.196, P = 0.0001), SF-36 scores, heart rate (mean: -10.04 vs 6.791, P = 0.0001), diastolic blood pressure (mean: -17.87 vs 10.45, P = 0.0001), systolic blood pressure (mean: -16.22 vs 4.751, P = 0.0001), LDL (median: -25.73 vs -0.2538, P = 0.0071), TC (median: -14.62 vs 4.123, P = 0.0005) and FBG (median: -11.42 vs 5.422, P = 0.0098). Clinical pharmacists can play an important role as part of a cardiac rehabilitation team through patient education and interventions to minimize DRPs.

Standardisasi Pelayanan Kefarmasian pada Pasien SKA



- Menurunkan mortalitas
- Mencegah reinfark
- Mengurangi komplikasi
- Mencegah drug related problem
- Meningkatkan kepatuhan pasien
- Memastikan penggunaan obat rasional dan aman

Strategi Pharmaceutical Care

PEMILIHAN TERAPI SESUAI GUIDELINE

- ❑ International Guideline (AHA, ESC, CCS)
- ❑ PNPK (Pedoman Nasional Praktek Kedokteran)
- ❑ Pedoman PERKI
- ❑ PPK (Panduan Praktek Klinik)
- ❑ Jurnal (Scopus)

PENGKAJIAN RESEP → IDENTIFIKASI DRUG RELATED PROBLEM

DUPLIKASI TERAPI

- Aspirin+ NSAID
- Candesartan+ARNI

Interaksi obat

- Aspilet, clopidogrel, enoxaparin
- Candesartan + spironolacton
- Clopidogrel + omeprazole

Ketepatan Dosis

- Pasien dengan gangguan ginjal (enoxaparin, ACE-I/ARB)
- Pasien dengan gangguan hati
- Pasien usia lanjut, dosis berdasar BB

Kontraindikasi

- Beta blocker pada syok kardiogenik
- Trombolitik pada pasien dengan perdarahan aktif

INGAT.. !!
Tidak semua
Interaksi Obat
Harus Diintervensi

REKONSILIASI OBAT

Dilakukan saat masuk RS, pindah ruangan dan pasien pulang

Menghindari duplikasi, mencegah diskperansi peresepan, mencegah interaksi obat

Misal : memastikan terapi lama tetap dievaluasi

VISITE

- Mandiri
- Team

- ❑ Menggali riwayat pengobatan obat, kebiasaan pasien sebelum MRS
- ❑ Rekonsiliasi
- ❑ Mengevaluasi efektivitas terapi →kondisi klinis pasien
- ❑ Mendeteksi DRP
- ❑ Memonitor efek samping obat
- ❑ Melakukan intervensi/rekomendasi terapi ke DPJP
- ❑ Edukasi/konseling pasien

Pemantauan Terapi Obat (PTO)

Efikasi/klinis pasien

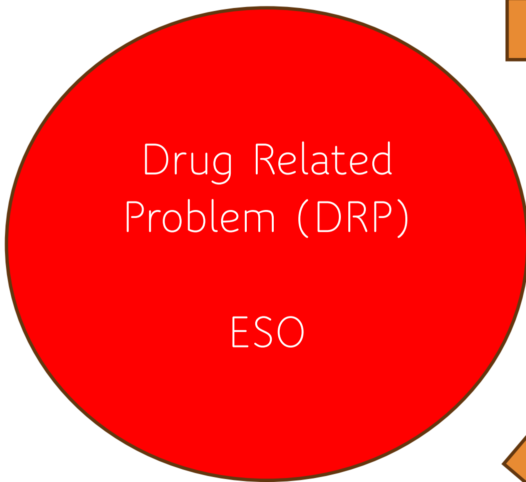
- Tekanan darah, HR, profil lipid, fungsi jantung (EF), nyeri dada, saturasi oksigen, EKG, aritmia

Safety/ efek samping

- Resiko Perdarahan (antikoagulan, antiplatelet)
- Hipokalemia/hiperkalemia (diuretic, ACE-I, MRA)
- Gangguan Fungsi Ginjal
- Hepatotoksisitas dan nyeri otot (Statin)

Hasil Laboratorium

- Troponin, CKMB, Hb, trombosit, fungsi ginjal, elektorlit, profil lipid



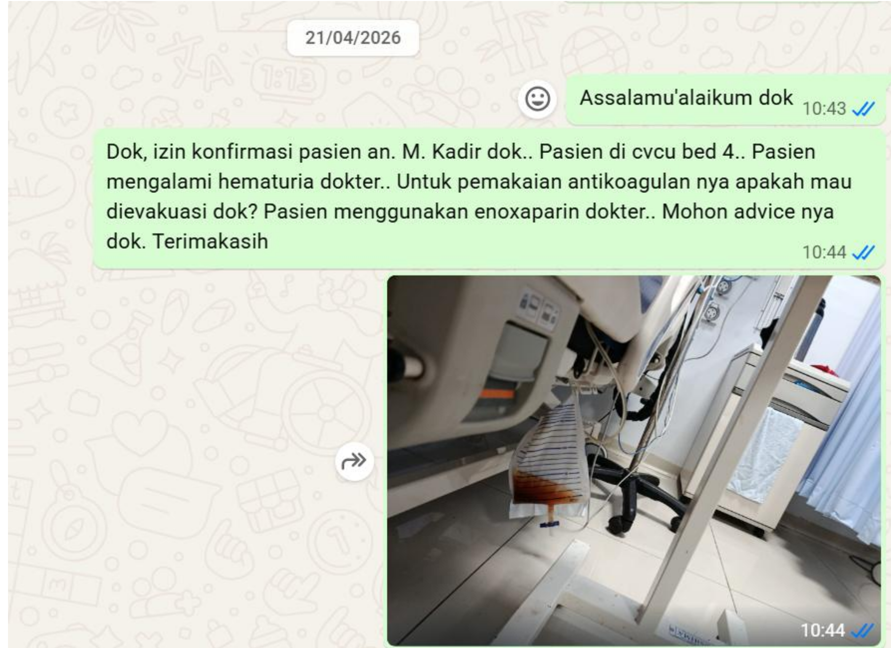
Konfirmasi ke DPJP

Pasien sumardi bin kasir diresepkan ome inj dan cpg dok (interaksi mayor).. Apakah boleh di switch ke lansoprazole kapsul dok untuk meminimalisir interaksinya? 10.05

Anda
Pasien sumardi bin kasir diresepkan ome inj dan cpg dok (interaksi mayor).. Apakah boleh di switch ke lansoprazole kapsul dok untuk ...
Boleh 14.35

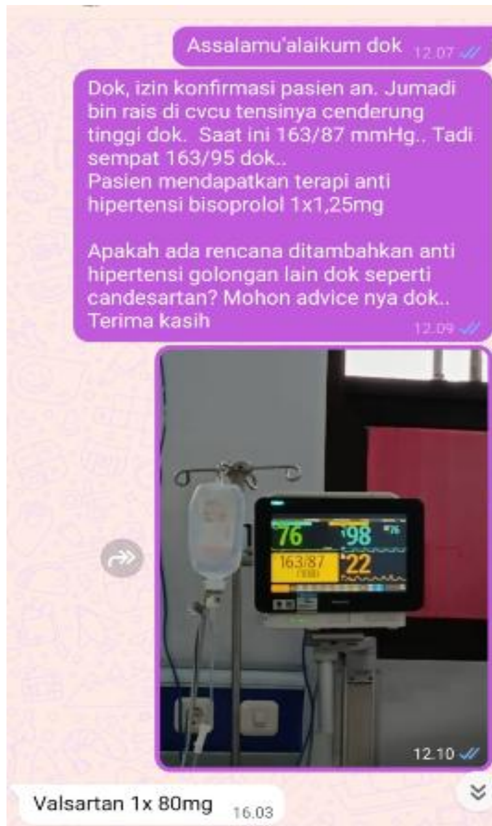
Intervensi/ rekomendasi

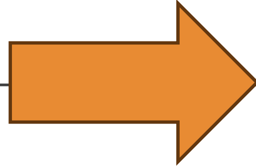
Monitoring



Dokumentasi (SOAP)

You
Dok, izin konfirmasi pasien an. M. Kadir dok.. Pasien di cvcu bed 4.. Pasien mengalami hematuria dokter.. Untuk pemakaian antikoagulan nya apakah mau ...
Stop enox 13:50



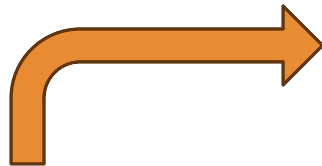


Winda Kirana Ade Putri, Apt, M.Clin.Pharm
12-MAY-2026 16:58
CVCU
202605090398
RAWAT INAP
APOTEKER
TTD:

Subjective:
nyeri di area bekas tusukan
Objective:
TD: 174/ 83mmHg, HR: 78/menit, RR: 22/menit, Temp: 37°C, SpO2: 98%
leukosit 22.66 $10^3/mm^3$ **
troponin T 2639 pg/mL #
Assessment:
- kombinasi aspirin, ticagrelol dan enoxaparin meningkatkan resiko perdarahan
- pemakaian antibiotik empiris ciprofloxacin hari ke 3
- TD pasien cenderung meningkat, bisoprolol belum efektif mengatasi HT pasien
Plan:
- monitoring tanda-tanda perdarahan
- monitoring tanda infeksi dan durasi pemakaian antibiotik
- disarankan penambahan antihipoertensi golongan lain (ARB) --> konfirm dr. ... valsartan 1x80 mg dan monitoring tekanan darah pasien
- edukasi obat ke pasien

Winda Kirana Ade Putri, Apt, M.Clin.Pharm
26-MAR-2026 16:50
Ruang Rupit 1.1
2603230257
RAWAT INAP
APOTEKER
TTD:

Subjective:
nyeri dada hilang timbul
Objective:
TD: 125/ 80mmHg, HR: 87/menit, RR: 20/menit, Temp: 36.7°C, SpO2: 99%
LDL 161 mg/dL
Koletserol total 209 mg/dL
Assessment:
- Pasien ACS dengan komplikasi DM termasuk dalam kategori high risk, sehingga wajib mendapatkan terapi statin
- hiperlipidemia belum diterapi
Plan:
- disarankan pemberian terapi statin high intensity (atorvastatin)
- monitoring efektivitas terapi (gula darah terkontrol, nyeri dada teratasi), hemodinamik pasien, dan potensi efek samping obat (rhabdomyolisis, perdarahan saluran cerna)
- edukasi obat ke pasien
Instruksi PPA:



26/03/2026

Assalamu'alaikum dok.. Izin konfirmasi pasien an. Husnaini bt syafarudin di rupit 1.2 dok.. Pasien dengan uap dan dm dengan hiperlipidemia. LDL pasien 161 dok.. Terapi statin belum ada. Apakah mau ditambahkan statin high intensiti dok? Mengingat pasien dengan acs komplikasi dm termasuk high risk dokter.. Mohon advice nya dok.. Terima kasih 16:20

Tlg tambahkan Win, 1x 20mg, tk

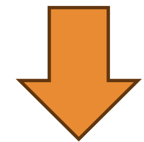
Winda Kirana Ade Putri, Apt, M.Clin.Pharm
13-MAY-2026 16:04
CVICU
RAWAT INAP
APOTEKER
TTD:

Subjective:
belum bisa dinilai
Objective:
TD: 117/ 74mmHg, HR: 148/menit, RR: 25/menit, Temp: 38.5°C, SpO2: 98%
INR > 7.83 #
PT > 90.0 detik **
APTT 57.1 detik **
skala naranjo 7
leukosit : 11.80 $10^3/mm^3$ **
candida score 4
Assessment:
- pemakaian antibiotik meropenem dan antijamur fuconazole hari ke 2
- pasien mengalami peningkatan nilai faal haemostasis diduga efek samping dari pemakaian antikoagulan warfarin dan heparin. peningkatan nilai faal hemostatis meningkatkan resiko perdarahan.
Plan:
- monitoring tanda-tanda infeksi dan durasi pemakaian antibiotik dan antijamur
- disarankan evaluasi pemakaian antikoagulan --> konfirm dr. indah warfarin turun dosis 1 mg/ 24 jam, heparin stop sementara (masuk lagi sore nanti), vit K extra 1x pemberian
- monitoring tanda-tanda perdarahan dan nilai faal hemostatis pasca evaluasi
Instruksi PPA:

EDUKASI DAN KONSELING PASIEN

- Kepatuhan minum obat→ seumur hidup (DAPT, statin, antihipertensi)
- Tujuan penggunaan obat, cara penggunaan, lama terapi, efek samping, interaksi obat-obat atau obat-makanan
- Modifikasi gaya hidup (diet rendah lemak/garam, stop merokok, olahraga/aktivitas fisik bertahap, kontrol diabetes dan hipertensi)
- Tanda Bahaya (kapan harus segera ke IGD)→ nyeri dada berulang, sesak berat, pingsan, perdarahan

- ❑ Saat pasien dirawat
- ❑ Saat pasien pulang

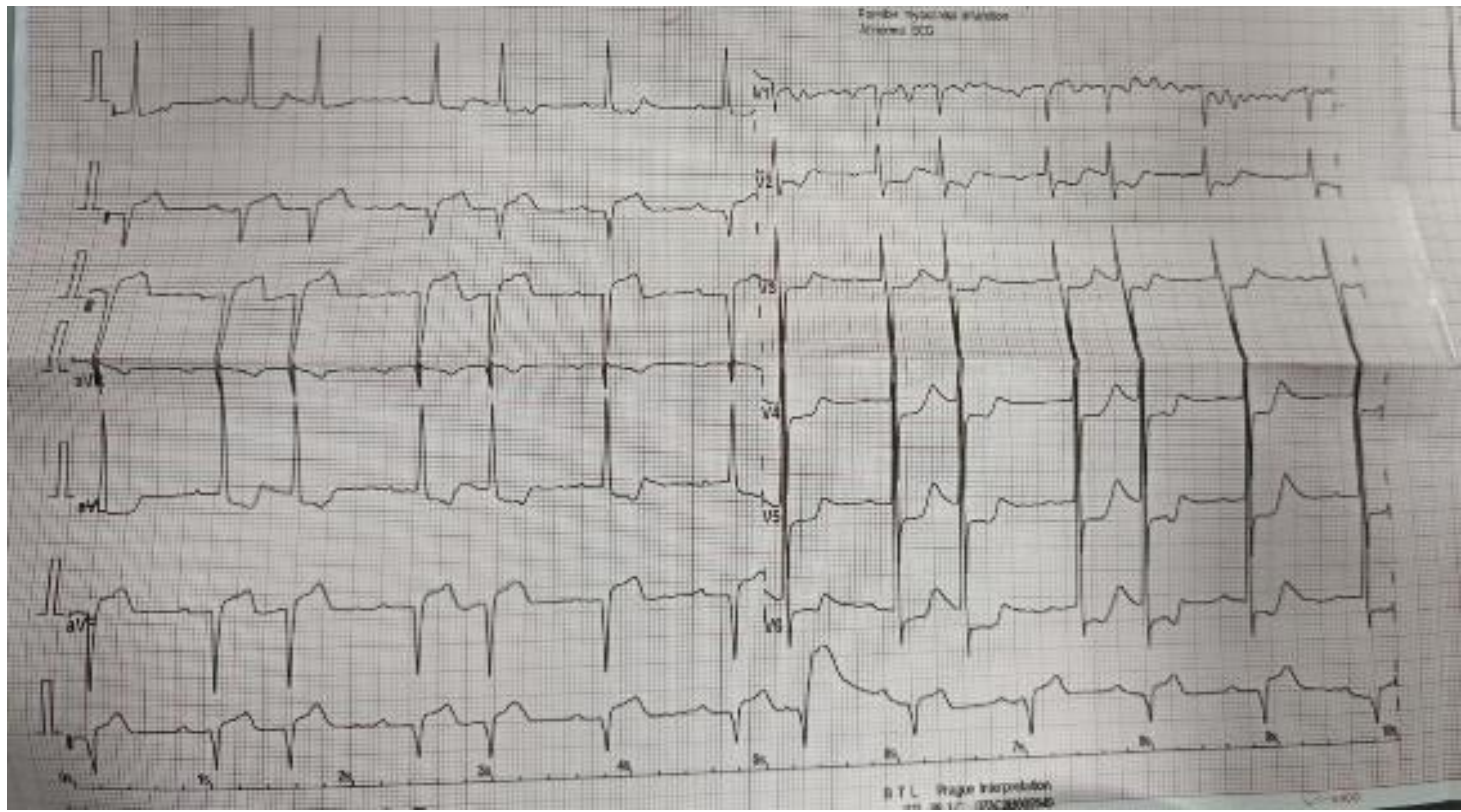


- ❑ Pasien
- ❑ Keluarga pasien

CONTOH KASUS 1

Tuan N usia 76 tahun datang ke RS dengan keluhan nyeri dada yang menjalar sampai ke lengan. Hasil EKG terlampir. TD pasien 90/60 mmHg, HR 90x/min. Pasien juga menderita DM tipe 2. Hasil lab menunjukkan HbA1C 10,1; GDS 256 mg/dL, GDP 234 mg/dL. Sehari-hari pasien rutin mengkonsumsi metformin 500 mg tiap 8 jam. Pasien mendapat terapi aspilet tiap 24 jam, ticagrelol 90 mg tiap 12 jam, enoxaparin 0,6 ml tiap 12 jam, bisoprolol 1x5 mg, candesartan 1x8 mg, isdn 5 mg SL, metformin 3x500 mg.

Bagaimana Pharmaceutical care pada kasus ini?



CONTOH KASUS 2

Tuan Rudi, 58 tahun, datang ke RS dengan keluhan nyeri dada 4 jam. Nyeri dada menjalar ke lengan, berkeringat dingin. EKG menunjukkan pasien mengalami NSTEMI. Nilai CrCl 45 mg/min. BB pasien 72 kg. Diberikan terapi enoxaparin standar 1 mg/kgBB tiap 12 jam. Pasien juga diberikan terapi aspirin 100 mg/24 jam, clopidogrel 75 mg/24 jam, omeprazole kapsul/24 jam, candesartan 8 mg/24 jam, bisoprolol 2,5 mg/24 jam.

Bagaimana seorang farmasis menilai kasus ini?

Jika pasien ingin menjalani tindakan invasif, bagaimana penggunaan antikoagulan pada kasus ini?

THANK YOU