

CT

(Pamiray)

가¹

: CT

Pamiray (iopamidol)
: 2 Ultravist (iopromide) CT
30 Pamiray CT ,
가 paired t - test

: Pamiray Ultravist CT ,
Ultravist , Pamiray
30 3 , 2 가 (p > .05). Pamiray

: Pamiray CT
가

가
가

가

CT

iopamidol
Pamiray (Dongkuk Pharm., Seoul, Korea)

(1 - 4).

(3 - 11).

nonionic monomer iopromide (Ultravist;
Schering AG, Berlin, Germany), ioversol (Optiray; Mallinckrodt
Medical, St Louis, U.S.A.), iohexol (Omnipaque; Winthrop -
Breon, New York, U.S.A.)

Pamiray 370

370 mg/mL

가

가 Ultravist 370

Pamiray 370 iopamidol 0.7552 g/mL

2003 4 18

2003 8 8

tromethamine 1.0 mg/mL, edetate
calcium disodium 0.39 mg/mL, pH hydrochloric
acid,

. Pamiray 370 800 ± 10 mOsm/kgH₂O .
Ultravist 370 (Schering AG, Berlin, Germany)
iopromide 0.76886 g/mL 610
mOsm/kgH₂O .

2000 12 2001 3
CT 2
Ultravist CT
Pamiray 30
가 , 가 , CT

. CT 7.5 (0.5 - 23.5)
30 가 23 , 가 7 ,
36 73 55.8 .
19 , 3 , 2 , ,
1 .

120 cc Pamiray
3 cc 40
Ultravist
CT Somatom plus 4 (Siemens AG, Munich,
Germany) . 19 35
5 mm, 5 mm, 120 kV, 150 mA
65
. 11

: CT (Pamiray) 가

65 5 mm,
7 mm, 120 kVp, 150 mA .

Ultravist
CT . Pamiray
CT 22
CT 1 PACS workstation CT
HU 2
Pamiray CT 8
PACS workstation CT HU 1
CT CT

Hounsfield Unit (HU)

HU
HU (12). HU PACS
workstation 5 - 8 mm²

가 paired t - test
p 0.05

. 48

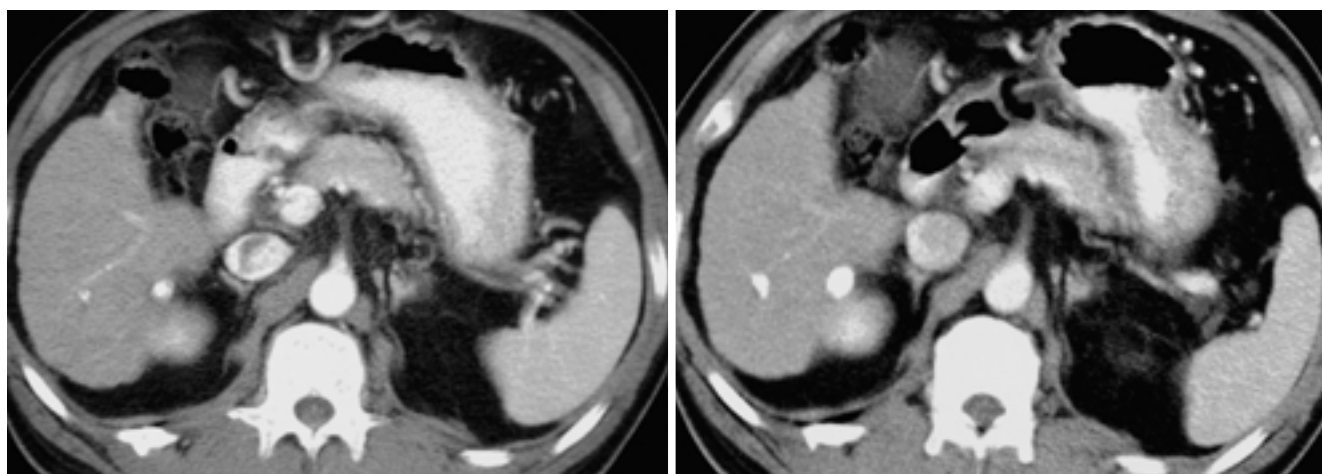


Fig. 1. Portal phase of abdominal CT scans obtained after injection of Pamiray (A) and Ultravist (B) in a 57-year-old man with hepatocellular carcinoma.

triiodisophthalic acid bis - (2 - hydroxy - 1 - hydroxymethyl) diamide

Pamiray 가 CT (13).

Pamiray CT 22
3 , CT 8 1 CT
19 7

Pamiray Ultravist CT
($p > 0.05$) (Fig. 1, 2) (Table 1, 2).
Pamiray CT 30 25
3 , 2 가

Pamiray
iopamidol monomer
L - 5 - (2 - hydroxypropionylamino) - 2, 4, 6 -

Table 2. Measured Attenuation Value (HU) of Abdominal Organs on Single Phase Contrast-enhanced Abdominal CT ($n = 7$)

	Mean \pm SD		
	Pamiray*	Ultravist [†]	p -value [‡]
Aorta	246.3 \pm 39.7	235.8 \pm 64.0	0.593
IVC	152.4 \pm 41.0	164.6 \pm 39.3	0.425
PV	178.9 \pm 46.6	194.4 \pm 18.4	0.355
Liver	108.5 \pm 23.5	130.5 \pm 16.6	0.099
RK	202.5 \pm 37.9	220.4 \pm 33.7	0.287
LK	205.5 \pm 33.1	220.0 \pm 36.4	0.3

HU = Hounsfield Unit, SD = standard deviation

IVC = inferior vena cava, PV = portal vein

Liver = liver parenchyma, RK = right kidney, LK = left kidney

*Abdominal CT obtained after injection of Pamiray

[†]Abdominal CT obtained after injection of Ultravist

[‡]Statistical significance test was done by paired t-test

Table 1. Measured Attenuation Value (HU) of Abdominal Organs on Two Phase Contrast-enhanced Abdominal CT ($n = 19$)

	Early phase (Mean \pm SD)			Portal phase (Mean \pm SD)		
	Pamiray*	Ultravist [†]	p -value [‡]	Pamiray*	Ultravist [†]	p -value [‡]
Aorta	285.2 \pm 50.0	278.4 \pm 75.3	0.633	201.3 \pm 31.3	202.8 \pm 38.2	0.775
IVC	125.3 \pm 60.1	126.3 \pm 46.1	0.955	166.0 \pm 29.4	163.1 \pm 39.2	0.68
PV	127.7 \pm 31.8	120.5 \pm 35.1	0.401	208.3 \pm 29.7	211.4 \pm 36.3	0.634
Liver	83.8 \pm 24.5	86.3 \pm 14.9	0.695	125.6 \pm 20.3	138.2 \pm 32.0	0.126
RK	206.9 \pm 40.1	189.1 \pm 43.9	0.088	223.7 \pm 37.6	222.9 \pm 45.3	0.891
LK	206.2 \pm 36.4	193.1 \pm 48.4	0.248	226.0 \pm 35.6	225.1 \pm 43.4	0.86

HU = Hounsfield Unit, SD = standard deviation, IVC = inferior vena cava, PV = portal vein, Liver = liver parenchyma,

RK = right kidney, LK = left kidney, * Abdominal CT obtained after injection of Pamiray

[†]Abdominal CT obtained after injection of Ultravist, [‡]Statistical significance test was done by paired t-test

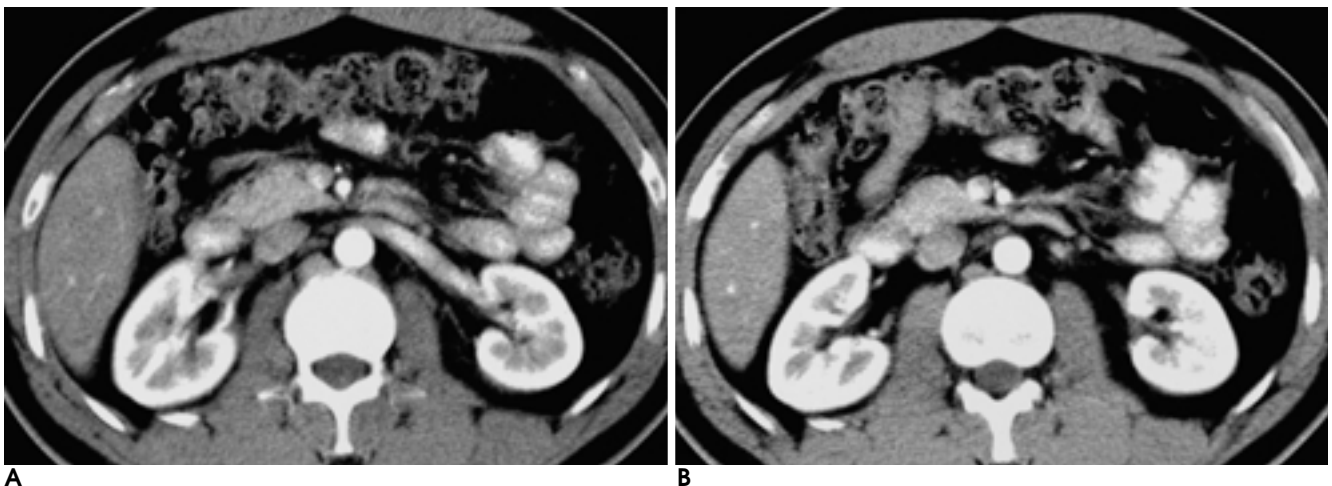


Fig. 2. Early phase of abdominal CT scans obtained after injection of Pamiray (A) and Ultravist (B) in a 39-year-old man with hepatocellular carcinoma.

1. Bettmann MA. Angiographic contrast agents: conventional and new media compared. *AJR Am J Roentgenol* 1982;139:787-794

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Clinical Efficacy of Pamiray as a Nonionic Intravenous Contrast Material for Abdominal CT¹

Kun Young Lim, M.D., Jin Mo Goo, M.D., Seung Ho Kim, M.D., Ji Hoon Kim, M.D.

¹Department of Radiology, Seoul National University College of Medicine, Institute of Radiation Medicine, SNUMRC

Purpose: To compare the clinical efficacy of Pamiray (iopamidol) as an intravenous nonionic contrast material in abdominal CT with that of Ultravist (iopromide), an established nonionic contrast agent.

Materials and Methods: Thirty patients who had undergone abdominal CT using Ultravist during the previous two-year period underwent abdominal CT using Pamiray after written consent to its use had been obtained. During scanning using both of these media, the regions of interest facility was used to measure, in Hounsfield units, attenuation in the liver, bilateral kidneys, aorta, portal vein, and inferior vena cava, and the paired t test was used to assess the statistical significance of the findings. The severity of adverse effects, if any, experienced during contrast material injection was classified as mild or severe, and their frequency was examined.

Results: There was no significant difference between Pamiray and Ultravist in terms of the degree of contrast enhancement observed ($p > 0.05$). During scanning in which Pamiray was used, three patients felt hot and two experienced mild nausea, but in none were adverse effects severe.

Conclusion: For abdominal CT, Pamiray is comparable to Ultravist in terms of contrast enhancement. Where the use of a nonionic contrast medium is required, Pamiray could thus be a useful clinical alternative.

Index words : Contrast media

Contrast media, comparative studies

Address reprint requests to : Jin Mo Goo, M.D., Department of Radiology, Seoul National University Hospital,
28 Yongon-dong, Chongno-gu, Seoul, 110-744, Korea.
Tel. 82-2-760-2584 Fax. 82-2-743-6385 E-mail: jmgoo@plaza.snu.ac.kr